N.U.T. Conference.

Buxton

Easter, 1903.

Souvenir.

Presented by
John Heywood,
Publisher, London & Manchester.

THE
REMINGTON
does not overwork the
Operator.

The Operator cannot
overwork the
REMINGTON

THE

Remington Typewriter

HAS

1. The Most Compact Keyboard.
2. The Slightest Key Depression.
3. The Lightest and Most Even Touch.

There are three reasons why the REMINGTON is preferred by operators.

Employment Bureau Leaflet free by post.

REMINGTON TYPEWRITER COMPANY

(WYCKOFF, SEAMANS & BENEDICT),

84, Cross Street, Manchester;

100, Gracechurch Street, London, E.C.

AND ALL LARGE TOWNS.

Blackie's Complete History Readers

All Teachers adopting Concentric Histories should see this excellent series.

A new Series of History Readers on the **Concentric Method**, *each (excepting Book VI) profusely illustrated with* **Coloured Illustrations** *and Pictures in Black and White. Each volume gives a vivid and general view of the subject suited to the age and attainments of the pupils. With Summaries and Meanings.*

Book I.—Stories from History. } *In the*
Book II.—Stories from History. } *Press.*
Book III.—An Introduction to British History. 1s. 2d.
Book IV.—A more detailed Outline than No. III. 1s. 4d.
Book V.—A more detailed Outline than No. IV. 1. 6d.
Book VI.—A Brief Survey of British History. By G. Townsend Warner, M.A. Eighth Edition. 1s. 6d.

Blackie's New Century Geography Readers

THE BEST AND BRIGHTEST GEOGRAPHY READERS EVER PUBLISHED.

The Series contains over **70 Coloured Pictures, 50 Coloured Maps,** *as well as a large number of beautifully reproduced Photographs and other Illustrations.*

Book I.—Geography and Common Things. PART I. 10d.
Book II.—Geography and Common Things. PART II. 1s.
Book III.—Industrial England. 1s. 2d.
Book IVa.—The British Isles and Glimpses of Great Britain. 1s. 6d.
Book IVb.—The British Isles and Europe. 1s. 6d.
Book IVc.—The British Isles. 1s. 6d.
Book V.—Europe. 1s. 6d.
Book VI.—Geography of Greater Britain. 1s. 6d.

Nature Studies

By Professor G. F. S. ELLIOT, M.A., B.Sc., F.R.G.S. Fully Illustrated. 3s. 6d.

This new book, just published, has been written specially for teachers and others engaged in giving *nature knowledge lessons* to children. Written in simple, non-technical language, the book gives a very clear, full, and up-to-date exposition of Plant Life in its myriad forms. All teachers interested in Nature Study should procure this extremely valuable book.

ILLUSTRATED EDUCATIONAL CATALOGUE ON APPLICATION.

BLACKIE & SON Ltd., 50, Old Bailey, LONDON, E.C.

RYDE'S

ORAL & CORRESPONDENCE CLASSES

FOR

Scholarship and Certificate.

(No other Examinations taken).

THE Oral Classes are held at St. Sepulchre's Schools, Holborn Viaduct, E.C. The Tutors who give the Lectures in the Oral Classes also prepare the **Correspondence Papers** and mark the Students' Exercises. Correspondence Students may therefore be certain that their work is in the hands of capable Teachers.

All the Correspondence Papers are new, well illustrated, and reproduced with great clearness from stencils cut by good type-writing machines. Specimen papers will be forwarded upon application.

FEES:—Certificate, ***£1 : 1 : 0*** *per Quarter.*
Scholarship, ***17s. 6d.*** *per Quarter.*
Religious Knowledge Course, January to October. Fee, ***10s. 6d.***

For further particulars please apply to

PERCY W. RYDE,

79, GRESHAM STREET,

LONDON, E.C.

JONES & ATTWOOD STOURBRIDGE

Telegrams: "HEAT," Stourbridge.
Telephone No. 10.

Churches,
Chapels,
Schools,
Greenhouses,
Dwelling Houses,
Public Buildings,
etc.,
HEATED ON THE MOST APPROVED SYSTEMS.

FAILURES TURNED INTO SUCCESSES.

Catalogues Free.

Makers of Every Description of

HEATING APPARATUS.

EDUCATIONAL FURNISHING Co LTD STOURBRIDGE

Patentees and Makers of

BALL BEARING, SLIDING and FOLDING

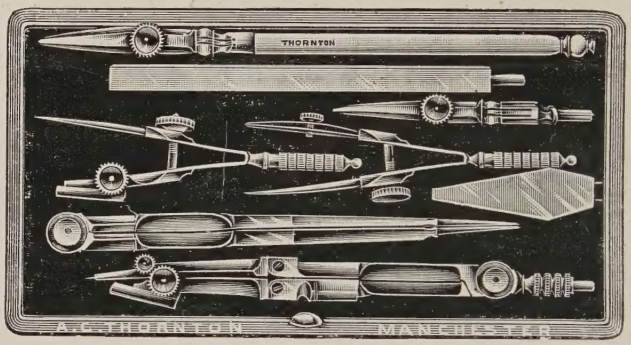
PARTITIONS

CHURCH, COLLEGE, OFFICE, BANK, MUNICIPAL, and

SCHOOL FURNITURE

Over 250 Schools Supplied. Illustrated Catalogue Free.

ENGLISH DRAWING INSTRUMENTS.



The very Latest, Best and Cheapest.

NEW CALCULATING SLIDE RULE. DRAWING BOARDS.
T SQUARES. PENCILS. COLOURS, &c.

New Edition: Illustrated Catalogue, best and most complete published. Post free.

A. G. THORNTON, Practical Manufacturer,
25½, ST. MARY'S STREET, MANCHESTER.

Teachers are invited to Inspect

Messrs. NEWMANN'S EXHIBIT of

Books, Charts, and Kindergarten Materials.

The Press Forward Readers. A Revolution in teaching to read. Infant Series.
Primer I. Parts I. and II. Part I .. .. per doz. **3/-**
Part II. .. .. „ **4/-**
„ **II.,** in one Book .. .. „ **6/-**
Infant Reader. Part I., per dozen **6/-**; Part II., per dozen **6/-**; for "Standard O," per dozen **9/-**. Standards I. to III., per dozen **9/-, 10/-** and **12/-**
Reading Sheets to correspond with Primer I., Parts I. and II., each net, **10/6.**

Newmann's Geographical Reader—
Stage I. "Home and the Neighbourhood" .. .. per doz. **9/-**
Stage II. "Definitions. Rambles to the Seaside and into the Country" „ **10/-**
Stage III. England .. .. each **1/9**

Object Lessons in Nature Study, based on Observation and Experiment. By H. Major, B.A., B.Sc., fully illustrated with Blackboard Sketches, &c. Vol. I. **2/6.** Vol. II. **3/6.**
The method with which the subject is treated in these Volumes furnishes an excellent example of how truly educative Object Lessons in Nature Study can be made. Many a dull hour will be enlivened and cheered by the purest joy if children are taught in school-days how to lift the veil that hides the treasures of life.

Observation Lessons of Plant Life: A two years' course of study by Mrs. Beverley Ussher and Dorothy Jebb. Profusely illustrated .. .. net **4/-**

Elementary Brushwork on the Developing system. By Marion W. Hudson. With full instructions .. .. net **5/6**

Elementary Brushwork. By Roland Hill.. New and enlarged edition. With a Preface by Alma Tadema .. .. net **6/6**

LONDON:—84, Newman Street, Oxford Street, W.

Jarrold & Sons' Publications.

TEACHERS AND PUPIL TEACHERS' SERIES.

Just Reprinted. 11th Thousand.
New and Revised Edition.

School Method.

Notes and Hints from Lectures delivered at the Borough Road Training College, London.

By F. J. GLADMAN, B.A., B.Sc.

With Revisions and Additions by J. W. JARVIS,
St. Mark's Training College, Chelsea.

Crown 8vo. Cloth, 2/6.

"About the best-known Pupil Teachers' Text-Book extant. It is an excellent summary of the principles underlying the theory and practice of Teaching."—*The Pupil Teachers' Scholarship Student.*

Just Reprinted.
New and Revised Edition.

SCHOOL WORK.

By F. J. GLADMAN.

Thoroughly Revised and Brought Up-to-Date by J. W. JARVIS,
St. Mark's Training College, Chelsea.

In 2 Vols., 4s. each; or in 1 Vol., Complete, 7s. 6d.

Vol. I.—CONTROL AND TEACHING.
Vol. II.—ORGANISATION AND PRINCIPLES OF EDUCATION.

"The most complete treatment of the general question of school management which we have at present. Will prove greatly useful."—*Schoolmaster.*

Fourth Edition.

THE TEMPERANCE Science Reading Book

By JOHN TOPHAM.

Adopted by Special Order of the Commander-in-Chief in H.R.H.'s Army and Navy Schools.

1s. 6d.

"A well-arranged, excellently illustrated, and sensibly written work."—*Educ. News.*

SNELGROVE'S BOTANY BOOKS.

Object Lessons in Botany.

From Forest, Field, Wayside, and Garden.

By EDWARD SNELGROVE, B.A.

Part I., 33 Lessons - - - 2s. 6d.
„ II., 100 „ - - - 3s. 6d.
„ III., 50 „ - - - 3s. 6d.

"Real Object Lessons. Admirable in their aim, and skilfully worked out."—*Schoolmaster.*

A Complete Course of Natural History, for the Junior Classes.

Object Lessons in Natural History.

By
EDWARD SNELGROVE, B.A.

With an Appendix on the Correlation of Studies with Object Lessons.

46 Lessons. 3s. 6d.

"An easy and trustworthy introduction to Zoology."—*University Correspondent.*

An Entirely New Set of Reading Books With Coloured Frontispieces.

THE HEROIC READERS.

New Style. Fresh Matter.

Book I. - - 8d. | Book III., 1s. 2d.
„ II. - - 10d. | „ IV., 1s. 4d.
Books V. and VI., 1s. 6d. each.

WRITE FOR FREE SAMPLES AND SPECIMEN PAGES.

JARROLD & SONS, 10 & 11, Warwick Lane, LONDON, E.C.

SWAN SONNENSCHEIN & CO.

READING IN A TWELVE-MONTH.

A New Series of Readers, constructed chiefly on the Syllabic Method, whereby Fluent Reading may be acquired by every Average Child within the space of one Year. By A. SONNENSCHEIN. Each Volume Illustrated with a Coloured Frontispiece and many Engravings. Strongly bound in cloth extra.

BOOK I.—Short Vowels, with one Consonant on either or both sides of the Vowels; Suffixes 96 pp, 10d.; Also in the form of three INFANT PRIMERS (*see below*).

BOOK II.—Short Vowels, with combined Consonants on either or both sides of the Vowel; Double Vowels and Diphthongs, such as have only one pronunciation. 96 pp., 10d.

BOOK III —Long Vowels; Diphthongs; Anomalous Words and Silent Letters. 118 pp., 1s.

The Set may be had complete in One Volume, cloth extra, 2s. 6d.

THE PROBLEM OF TEACHING TO READ: A Teacher's Companion to "Reading in a Twelve-month," 1s

WORD-BUILDING SHEETS: SET I. (for BOOK I.) (*see below*), 5s. net. SET II. (for BOOK II), 9 sheets, in box, 5s. net.

"We have no hesitation in asserting that if the London School Board were to insist on the general adoption of the Sonnenschein method of teaching reading, they would introduce one of the most important educational reforms brought about since the Act of 1870." —*St. James's Gazette.*

"The Education Office might well give this system a fair trial, and if it proves satisfactory, introduce it into our elementary schools. It seems to promise results of the highest possible value."—*Daily News.*

SONNENSCHEIN'S INFANT PRIMERS. By A. SONNENSCHEIN. A New Series constructed on the Syllabic method.

No. 1. 32 pages, cloth, 3d.
No. 2. ,, ,, 3d.
No. 3. ,, ,, 3d.

Bound together these books constitute Book I. of "Reading in a Twelve-month."

WORD-BUILDING SHEETS. Set I., comprising nine sheets in large type on stout Manilla paper, eyeletted; together with a packet of cards. In box, 5s. net.

These Books have been at once adopted by numerous Teachers, and are being used by many thousands of children with the greatest success.

THE WONDERFUL CENTURY READER. By Dr. ALFRED RUSSEL WALLACE, F.R.S., Author of *The Malay Archipelago Island Life*, &c. 238 pp. With Coloured Frontispiece and 127 fine Illustrations, 2s.

The Volume presents a fascinating description of the principal inventions and discoveries of the 19th century, and is adapted for the use of Senior Scholars and Evening Classes.

"This may be truly called a wonderful book. Its subject, the inventions and discoveries of the 19th century, would appear to be too large for compression into a school reader, but the skill of the writer, combined with his profound scientific knowledge, has enabled him to tell the fascinating story in such a way as to enable all who read it to get a very fair idea of the enormous progress made since 1880 in our knowledge of the universe, and in our power to make practical use of the knowledge we have gained. The illustrations are worthy of the text, and the book is one which we hope all our readers will make a point of seeing. The story is not only well told, but marked everywhere by scientific accuracy, and it gives sound evidence of a happy faculty for making the more abstruse subjects clear to the common understanding."—*Secondary Education.*

"This reader is eminently adapted for use in higher grade schools or in higher standards of ordinary schools It is a splendid work, and one that will catch on very readily. Boys, especially, will devour it with avidity, for it treats of the advance of science during the past century. It is full of useful general knowledge, not a page but contains something interesting, and though dealing in the scientific subjects the language is everyday ordinary English, unobscured by undue technicalities."—*Teachers' Aid.*

SWAN SONNENSCHEIN & Co. Ltd., LONDON.

Nature Drawing
. . AND . .
Brush Drawing.

All Teachers should see the latest and best Drawing Copies in the market.

. . . THE . . .

NATURE STUDY DRAWING CARDS.

By ISAAC J. WILLIAMS, Gold, Silver and Bronze Medallist, Art Instructor to the Merthyr Tydfil School Board.

Beautiful Designs based upon the NATURAL Leaf, mounted in its natural colour on each card.

The SCHOOLMASTER says: "A *capital idea* . . . splendid Series of Drawing copies . . . both *teaching* and *production* are *excellent*."

A DRAWING INSPECTOR: "An exquisite series . . . should be used in every School."

Write for Specimens, &c., Post Free.

THE WELSH EDUCATIONAL PUBLISHING CO.,

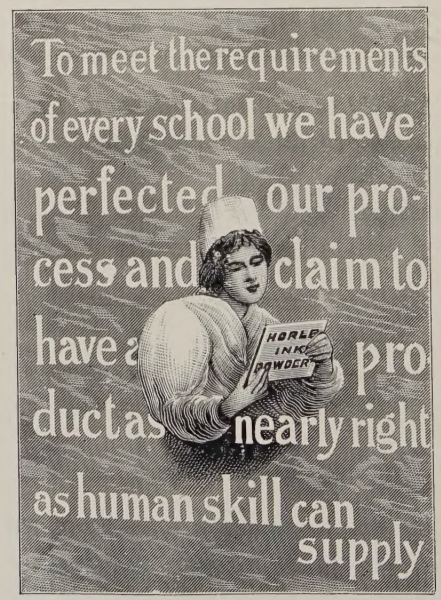
MERTHYR TYDFIL.

Messrs.

W. & R. CHAMBERS Ltd.

Have all their latest Publications on view at STALL No. 40. . .

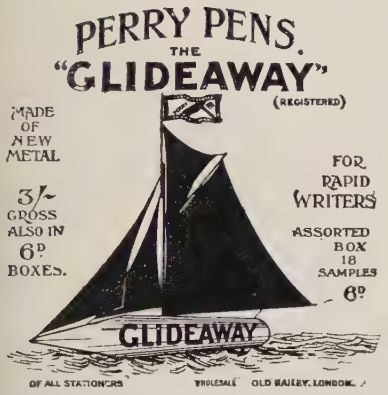
100,000 Sold to the London Board alone.



Messrs. Arnold & Son, Leeds.
Messrs. Educational Supply Ass., London
Messrs. Philip, Son & Nephew
Midland Educational Co., Birmingham.
FREE SAMPLES from **Horle & Co.,** HARPENDEN (Herts).

"Glideaway" (REGISTERED) Pens.

SMOOTH. RAPID. DURABLE.



Made in 5 varieties.
To suit all styles of . . Writing.
With Indented Point.

Mr. CHARLES MEADER, Stalbridge, says:—"Writing with them reminds me of riding down a gentle slope on a high-grade Bicycle. Makes writing a real pleasure."

Sample Box, 18 Pens, 6d. ***Of all Stationers.***

York's Optical Lantern Slides

NEW AND UP-TO-DATE SERIES.

1,740 SLIDES.

Prepared and arranged by Messrs. BOND & GROVER (London School Board) specially for teaching

Geography and History

In accordance with latest Minutes of Government Education Code.
Only complete set for all Standards on the market.

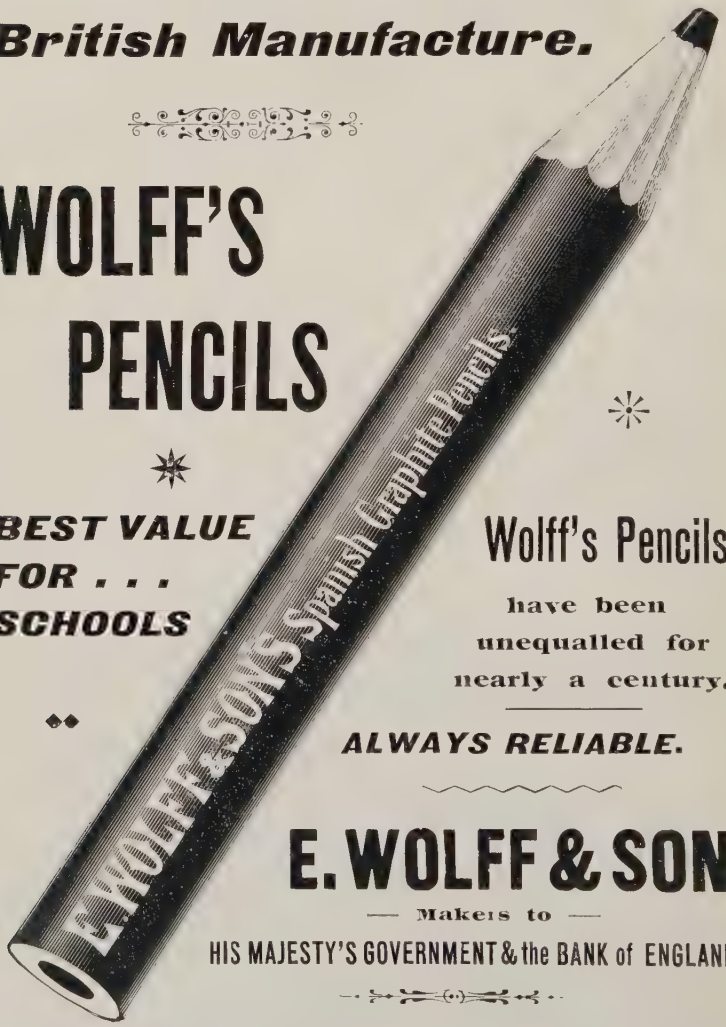
New Catalogue Gratis on Application.

YORK & SON,
67, Lancaster Road, Notting Hill, LONDON, W.

British Manufacture.

WOLFF'S PENCILS

BEST VALUE FOR . . . SCHOOLS



Wolff's Pencils

have been unequalled for nearly a century.

ALWAYS RELIABLE.

E. WOLFF & SON

— Makers to —

HIS MAJESTY'S GOVERNMENT & the BANK of ENGLAND

OFFICES: 55, Great Queen St., Lincoln's Inn Fields, LONDON, W.C.
FACTORY: Falcon Steam Pencil Works, Battersea, LONDON, S.W.
(WHOLESALE ONLY).

JOHN HEYWOOD'S

BUXTON CONFERENCE SOUVENIR.

EASTER, 1903.

SISSON & PARKER'S

RECREATIVE DRAWING CARDS.

The first on the market, and still the best. *In spite of imitations. Get a sample and judge for yourself.* ANIMALS, 2s. pkt. net; BIRDS, 2s. pkt. net; FISHES, 1s. 6d. pkt. net; FLOWERS, 2s pkt. net; COMMON OBJECTS, 2s. 3d. pkt. net; SIMPLE BRUSH LANDSCAPE DRAWINGS, 2s. 3d. net. All these are suitable for concurrent use of Brush and Pencil. The following are in Outline only—MEN, 2s. pkt. net; LANDSCAPES, 2s. pkt. net; ANIMALS' HEADS, 2s. pkt. net.

"They still hold the field as the most useful and popular drawing copies in the market."—*Teachers' Aid*, Feb. 28th, 1903.

SISSON & PARKER, Nottingham.

Anne Cowburn, COACH BUILDER and HARNESS MAKER,

Cheetham Hill Road, MANCHESTER.

A choice selection of highly-finished CARRIAGES, suitable for the coming season.

INSPECTION INVITED. • *Established 1779.*

JOHN HEYWOOD'S

CYCLISTS AND TOURISTS' MAP

OF 100 MILES ROUND MANCHESTER.

Printed in Colours, showing distinctly the Principal and other Roads, Railways, &c. Cheap, useful, accurate, and up-to-date.

'Just what we have wanted for years."—*Athletic News.*

In Cloth Case, 1s.; in Cloth Case and Mounted on Linen, 1s. 6d. 1d. extra for postage.

JOHN HEYWOOD, Deansgate and Ridgefield, Manchester; 29 & 30, Shoe Lane, London, E.C.

Books for Northern Cyclists and Tourists,

By HAYDON PERRY.

THE FIRST BOOK OF

ROAD AND LANE.

Yellow Pigskin, 1/6 net; Yellow Cloth, 1/- net.

THE SECOND BOOK OF

ROAD AND LANE.

Yellow Pigskin, 1/6 net; Yellow Cloth, 1/- net.

Supplied by JOHN HEYWOOD, Manchester; and all Booksellers.

London University Examinations.

FREE
MATRICULATION GUIDE

With the First Set of Papers under the NEW REGULATIONS, and Articles on Text-Books.

FREE GUIDES

TO

INTERMEDIATE SCIENCE,

With the Examination Papers of July, 1902, Solutions to the Papers in Pure Mathematics, and a List of Text-Books.

INTERMEDIATE ARTS,

With the Examination Papers of July, 1902, Solutions to the Papers in Pure Mathematics, and a List of Text-Books.

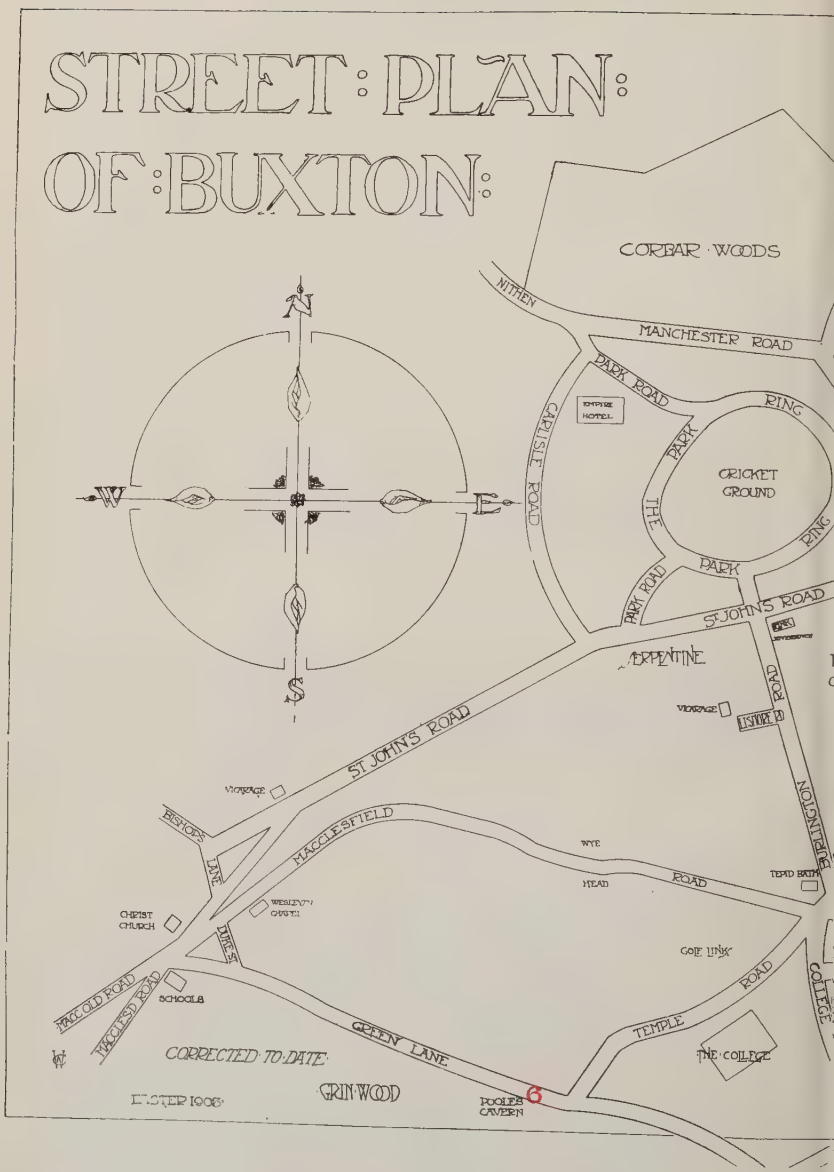
BACHELOR OF ARTS,

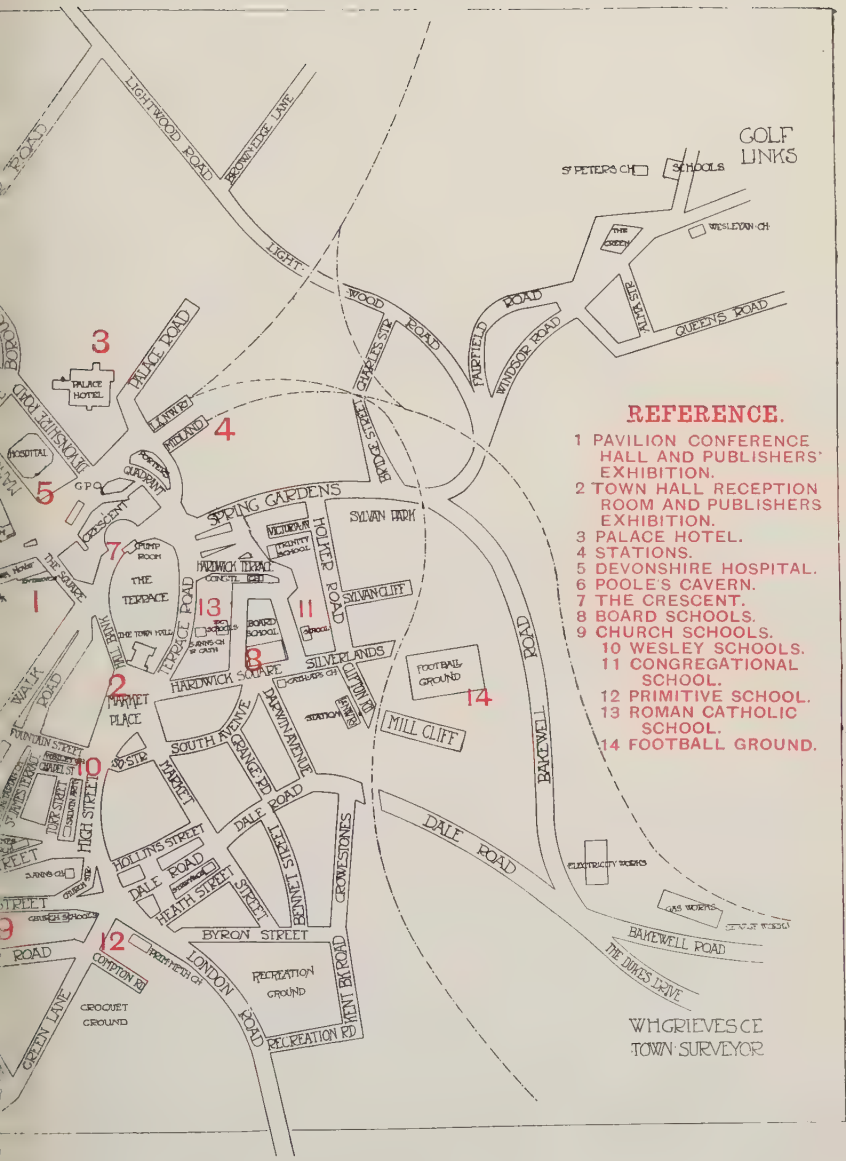
With Examination Papers set Oct., 1902, and a List of Text-Books.

The above, B.Sc. and B.D. Prospectuses, and full particulars of Classes for all London University Examinations, may be had POST-FREE on application to *THE SECRETARY,*

Univ. Corr. Coll. London Office,

32, Red Lion Square, HOLBORN, LONDON, W.C.


STREET : PLAN :
OF : BUXTON :
CORBAR WOODS
NITTEN
MANCHESTER ROAD
PARK ROAD
RING
EMPIRE HOTEL
CHESTER ROAD
PARK
THE
CRICKET GROUND
RING
PARK
PARK ROAD
ST JOHN'S ROAD
POST OFFICE
APPENTINE
VICARAGE
LISTER RD
GROVE
BUXTON
ST JOHN'S ROAD
VICARAGE
BISHOPS LANE
MACCLESFIELD
WYE
HEAD
ROAD
TEPID BATH
CHRIST CHURCH
WESLEYAN CHAPEL
DALE ST
GOLF LINKS
COLLEGE
ROAD
OLD ROAD
MACCLESFIELD ROAD
SCHOOLS
GREEN LANE
TEMPLE
THE COLLEGE
CORRECTED TO DATE
GRINWOOD
POOLES CAVERN
6


GOLF LINKS
ST PETERS CH
SCHOOLS
THE GREEN
WESLEYAN CH
ALTA VISTA
QUEENS ROAD
FAIRFIELD ROAD
WINDSOR ROAD
CHARLES STREET
BROOK STREET
LIGHTWOOD ROAD
BROWNSIDE LANE
LIGHTWOOD ROAD
PALACE ROAD
PALACE HOTEL
LARGER
MIDLAND
HOSPITAL
GPO
QUADRANT
CRESCENT
SPRING GARDENS
MEDIUM
INFANTS SCHOOL
SYLVAN PARK
HOLKER ROAD
SYLVAN CLIFF
THE TERRACE
PUMP ROOM
TERRACE ROAD
HARDWICK TERRACE
CONCERT HALL
BOARD SCHOOL
THE TOWN HALL
ST JOHNS CH
ST CATH
THE SQUARE
WATER HALL
WALK ROAD
HARDWICK SQUARE
SILVERLANDS
CEMETERY
STATION
RAILWAY
FOOTBALL GROUND
MILL CLIFF
MARKET PLACE
FOUNTAIN STREET
SOUTH AVENUE
DARWIN AVENUE
MARKET
HIGH STREET
TURK STREET
HOLLINS STREET
DALE ROAD
HEATH STREET
BONNET STREET
CROWESTONES
BAKEWELL ROAD
DALE ROAD
ELECTRICITY WORKS
GAS WORKS
BAKEWELL ROAD
THE DUKES DRIVE
BYRON STREET
COMPTON RD
PRIMITIVE CH
LONDON ROAD
RECREATION GROUND
RECREATION RD
VICTORIA RD
CROQUET GROUND
GREEN LANE
ROAD
STREET
REFERENCE.
1 PAVILION CONFERENCE HALL AND PUBLISHERS' EXHIBITION.
2 TOWN HALL RECEPTION ROOM AND PUBLISHERS EXHIBITION.
3 PALACE HOTEL.
4 STATIONS.
5 DEVONSHIRE HOSPITAL.
6 POOLE'S CAVERN.
7 THE CRESCENT.
8 BOARD SCHOOLS.
9 CHURCH SCHOOLS.
10 WESLEY SCHOOLS.
11 CONGREGATIONAL SCHOOL.
12 PRIMITIVE SCHOOL.
13 ROMAN CATHOLIC SCHOOL.
14 FOOTBALL GROUND.
W.H.GRIEVES C.E.
TOWN SURVEYOR

The University Tutorial Series.

SOME RECENT BOOKS.

Arithmetic, the Tutorial.—By W. P. WORKMAN, M.A., B.Sc. Second Edition. 3s. 6d.

"Takes first place among our text-books in arithmetic."—*Schoolmaster.*

"To be heartily recommended to the notice of all mathematical students."—*Mathematical Gazette.*

"Destined to supersede all other secondary treatises on the subject."—*Westminster Review.*

The New Matriculation Algebra.—By RUPERT DEAKIN, M.A. Lond. and Oxon. 3s. 6d.

This work is specially adapted to meet the requirements of the new Syllabus of London University Matriculation, which now includes Graphs of Algebraic Functions.

"One of the best elementary text-books we have seen."—*Teachers' Monthly.*

"Especially valuable for its many suggestions to students."—*Educational Times.*

Euclid.—Book V., VI, XI. By RUPERT DEAKIN, M.A. Lond. and Oxon. 1s. 6d.

Matriculation English Course.—By W. H. LOW, M.A. Lond., and JOHN BRIGGS, M.A. Camb., F.Z.S. 3s. 6d.

This book contains Analysis, Composition, Paraphrasing, and Précis-writing.

"The matter is clearly arranged, concisely and intelligently put, and marked by accurate scholarship and good common sense."—*Guardian.*

"Admirably fulfils its purpose. The chapters on précis-writing and indexing are excellent."—*Westminster Review.*

Matriculation Modern History.—With Maps, Plans and Tables. By C. S. FEARENSIDE, M.A. Oxon. 3s. 6d.

The Period covered is that required by the Syllabus, viz., from 1485 to the Death of Queen Victoria.

"A work that gives evidence of scholarship and clever adaptability to a special purpose, and on the production of which much care, forethought, and patient labour have evidently been expended."—*Guardian.*

"An excellent manual. The international history is very carefully treated."—*School World.*

The New Matriculation Chemistry.—By G. H. BAILEY, D.Sc. Ph.D., and R. H. ADIE M.A., B.Sc. Part I. (containing *The Tutorial Chemistry*, Part I., with chapters on Electrolysis and Interaction). 4s. Part II. (The Chemistry of Daily Life). 2s.

This book contains the recent additions to the Matriculation Chemistry Syllabus.

The New Matriculation Botany.—By A. J. EWART, D.Sc., Ph.D., F.L.S. 3s. 6d.

This work is specially designed to meet in full the requirements of the New Syllabus of the Matriculation Examination of London University.

Complete Catalogue of the University Tutorial Series and Lists of Books for LONDON UNIVERSITY, SOUTH KENSINGTON, and other Examinations, Post Free on application.

LONDON: W. B. CLIVE, University Tutorial Press Warehouse, 157, Drury Lane, W.C.

COURSE OF

FRENCH GRAMMAR & FRENCH COMPOSITION

By L. JANTON, B.A., B.Sc. (Univ. Gal.)

The Course embraces 5 books on *Grammar,* 3 books on *Composition,* and 2 *Readers.*

The newest, the best, and most complete Course published. Used in the first educational institutions in Great Britain. Write for Specimens to J & R. Parlane.

THE SCHOOL STAFF-SINGER: A Graded Course of Theory and Practice in Staff Notation for use in Schools. By JAMES DOWIE, Teacher of Edinburgh Choral Union Theory Classes. Price 2d ; cloth 3d.

THE HIGHER GRADE CHOIR. Parts I. and II. A Collection of Songs for the Upper Standards, Evening Classes, and Higher Grade Schools. Edited by ALAN REID, F.E.I.S. Price 2d. each; cloth 3d. each.

SCHOOL MELODY FOR THE STANDARDS. Edited by ALAN REID, F.E.I.S. Part I. for Infant Classes, 1½d. Parts II., III. and IV., 2d. each. This series contains such Theoretical and Practical Exercises and Songs as will occupy profitably the time of the Standards during the music lessons of a year.

SCHOOL MUSIC FOR THE STANDARDS. Thirty different Class Books from 1d. to 6d. Sol-fa and Staff. Specimens free on application.

MIRTH AND MUSIC. A New Collection of Gallery and Action Songs, Hymns, Marches, Games, and Recitations. for the Infant Room and the Lower Standards. By ALAN REID, F.E.I.S., and MAGGIE C. REID. Price 2/6, with Pianoforte Accompaniments.

HOME AND SCHOOL COOKERY. Containing new and economical Recipes for the Household, and adapted to the requirements of the Education Code for Schools, with valuable hints for Demonstrations and Domestic use. By MARY MORRISON, of the Edinburgh School of Cookery; Instructress in Cookery to the Forfar County Council—formerly to the Lancashire County Council. Price 3d.

J. & R. PARLANE, PAISLEY;

HOULSTON & SONS, LONDON.

GINN & CO., American Educational Publishers,

9, St. MARTIN'S STREET, LEICESTER SQUARE, LONDON, W.C.

London Representative: FRED. J. MATHESON

Among the books shown by GINN & Co. at the Buxton Conference of the National Union of Teachers are:

ANDREWS:	Seven Little Sisters who Live on the Round Ball that Floats in the Air	2/-
,,	Each and All: The Seven Little Sisters prove their Sisterhood	2/-
,,	Stories Mother Nature told her Children	2/-
,,	Stories of My Four Friends	2/-
,,	Ten Boys who Lived on the Road from Long Ago to Now	2/-
ATKINSON:	First Studies of Plant Life	2/6
BEAL:	Seed Dispersal	1/6
BLAISDELL:	Stories from English History	2/-
DAVIS:	Elementary Physical Geography	5/6
,,	Physical Geography	5/6
FRYE:	Brooks and Brook Basins	3/-
,,	Child and Nature	4/-
,,	Complete Geography	6/-
,,	Primary Geography	3/-
,,	Teachers' Manual	2/6
GOULD:	Mother Nature's Children	3/-
HODGE:	Nature Study and Life	7/-
KEMP:	History for Graded and District Schools	4/6
KITTREDGE & ARNOLD:	The Mother Tongue, I.	2/-
,, ,, ,,	Do. II.	3/-
KITTREDGE, ARNOLD & GARDINER:	Do. III.	4/6
LONG:	Beasts of the Field	7/6
,,	Fowls of the Air	7/6
,,	School of the Woods	7/6
,,	Secrets of the Woods; Wilderness Ways; Ways of Wood Folk	Each 2/-
MEIER:	Herbarium and Plant Description	3/-
MONTGOMERY:	Leading Facts of English History	5/-
MORLEY:	Flowers and their Friends	2/6
MYERS:	General History	6/6
,,	The Middle Ages	5/-
STICKNEY:	Earth and Sky—I. and II.	Each 1/6
STRONG:	All the Year Round: I, Autumn; II, Winter; III, Spring;	Each 1/6
WEED:	Stories of Insect Life: I.	1/-
WEED & MURTFELDT:	do. II.	1/6

Youth's Companion Series of Geographical Readers: The Wide World. Northern Europe. Under Sunny Skies. Towards the Rising Sun. Strange Lands near Home ... ... Each 1/-

Lists post free on application. Books sent on approval to teachers.

GINN & Co., 9, St. Martin's Street, London, W.C.

Buxton.

Presented by JOHN HEYWOOD.

Buxton Conference

SOUVENIR.

THE AUTHORISED

OFFICIAL GUIDE

FOR

THE NATIONAL UNION OF TEACHERS' CONFERENCE.

EASTER, 1903.

EDITED BY

EDWARD HALL AND ARNOLD WALKER.

JOHN HEYWOOD,
DEANSGATE AND RIDGEFIELD, MANCHESTER;
29 & 30, SHOE LANE, LONDON, E.C.

AN ADMITTED ANTIDOTE FOR INDIGESTION.

Coombs' 18 GOLD MEDALS

EUREKA SELF-RAISING

Is the BEST and ABSOLUTELY PURE.
Sold in **3d., 6d., 1/-** & **2/6** Bags.

Flour

Coombs' FOR INFANTS . . AND INVALIDS . .

3 Gold Medals.

Malted Food

Is a Perfect and Invaluable Article of Diet.

Sold in **6d., 1/-, 2/6** and **5/-** Tins.

Coombs' Eureka Effervescing Fruit Saline

An Invaluable Cooling Drink, Allaying Feverishness, Heartburn, Indigestion and Constipation. Sold in 5-oz. and 10-oz. Tins.

Coombs' Health Salt

A most Refreshing Drink. Sold in ¼-lb. Tins.

— COOMBS' —

Custard, Blanc Mange, Egg & Baking POWDERS.

Sold in **1d., 2d., 3d., 6d.** and **1/-** Boxes.

Total Awards.

PRIX d'HONNEUR. 34 MEDALS
(including 29 Gold).
2 DIPLOMAS OF HONOUR.

PREFACE.

We beg to tender our thanks to all who have contributed to this "Souvenir" of the Buxton Conference, to those who have permitted their photographs to appear, and to the writers of the articles, which, we believe, will prove interesting and instructive. Our acknowledgments are due to Mr. George Slater, of Fairfield, for placing at the disposal of the writer of the "Buxton" article his collection of rare and valuable books bearing on the history of the district; to the Rev. W. Fyldes, M.A., formerly of Hartington for allowing us to extract from his "Dovedale and other Dales" the substance of the one dealing with that charming neighbourhood; to Mrs. Hyde, for permission to use extracts from her late husband's "Buxton and its Baths"; and to Messrs. D. Latham, Steward and Co., Mr. F. Wright, Mr. W. Pilkington (Chemist), and Mr. Gardner, of Brereton; Mr. May, of Bakewell; Dr. Nall, of Disley; Mr. Chapman, of Tideswell; and Mr. Potter, of Matlock, for supplying us with photographs to illustrate the book.

The illustrations of the Winnats, from photo. by Mr. Oppenheim; and Ludchurch, and the Kinder Brook below the Downfall, from photo. by Richard Keene, Ltd., have been kindly lent from Mr. Ernest A. Baker's forthcoming work on "Moors, Crags, and Caves of the High Peak."

EDWARD HALL,
ARNOLD WALKER, } Editors.

PUBLISHERS' EXHIBITION

Buxton Conference of the N.U.T.

One of the most interesting exhibits will be those of

W. & A. K. JOHNSTON'S Ltd.

In addition to the ordinary publications of this well known firm, the following new ones will be on view:—

New and Unique Series of Wall-Atlas Maps

FOR CLASS TEACHING.

South Africa, India, Australia, New Zealand, Canada and the West Indies, and the British Empire.

Price **6/-** each, or bound together as a Wall-Atlas of the British Empire, price **21/.**

New and Unique Series of Drawing Charts.

Based on Nature Study, and illustrating the correlation of Drawing and Object Lessons.

Published in three sets of 20 charts each, printed in simple colours, each design representing a Natural Object, an illustration for an Object Lesson and a Drawing Exercise.

Drawing Cards and Books to correspond with each set.

New Series of Drawing Cards and Books.

Nature Study and Free-arm Series, three sets, cards and books.

Animals' Heads, or Sketches from Life at the Zoo, two sets, plain and coloured, cards and books.

Pattern Drawing Series, three books only.

Lettering Series, one book only.

NEW OBJECT LESSON PICTURES, &c., &c.

W. & A. K. JOHNSTON Ltd., Edinburgh and London.

CONTENTS.

PAGE.

Buxton, Burbage, and Fairfield; by John Brandreth, Author of "Rambles in the Peak" 61

Buxton as a Health Resort; by G. Lorimer, M.D., formerly Physician to the Devonshire Hospital 91

Municipal Buxton; by W. Hedley Grieves, M.S.I., F.I.S.E., Town Surveyor of Buxton..... 105

Geology of the District; by Elizabeth Dale, late Pfeiffer Student at Girton College, Cambridge 111

Botany of the District; by Professor Barker, of the Yorkshire College, Sheffield 121

Dawn of Civilization in Peakland; by W. J. Andrew, F.S.A., Hon. Editor of the Derbyshire Archæological and Natural History Society's Journal 127

Chatsworth; by Albert E. Wragg, Edensor..... 139

Haddon Hall; by Percy H. Currey, Member of the Derbyshire Archæological Society..... 155

Castleton, Eyam, and Tideswell; by W. A. Downham, F.G.S., Stockport..... 167

Dovedale; by Rev. W. Fyldes, M.A., formerly Vicar of Hartington 191

Matlock Bath; by G. J. Rowland, Matlock Bath 197

Lyme Hall; by John T. Lowe, Disley 209

Cave Exploration; by Ernest A. Baker, M.A..... 213

Walks and Excursions; by the late Samuel Hyde, M.D. ... 227

Cycle Runs; by Haydon Perry, Editor of the Cycling Column in "The Captain," &c. 239

Best INK-VALUES in the World.

For COLD WATER.

20,000 Schools in Britain and Colonies use them.

"DUCKETT-INE" (*Splendid Black*), **Gallon Tin, 1s. 1½d.**
"NIGER-INE" (*Washing-out-of-Clothing Black*), **Gallon Tin, 10½d.**
COLOURS (*for Inks and Brushwork*), **Pint, 4½d.; Half-gal., 1s. 1½d.**
Of Dealers—**ASK FOR THEM.** *Samples Free*—**Write for them.**
Apply always—**DUCKETT'S DRY INKS, SHEFFIELD.**

The American School and College Text-Book Agency

ARE AGENTS FOR:—

AMERICAN EDUCATIONAL JOURNALS.
PERRY PICTURES (Special Illustrated Catalogue 3d.)
BLACKBOARD STENCILS.
THE NEWEST AMERICAN TEXT-BOOKS in all Subjects.
SMALL RELIEF MAPS.

New Catalogue of Books now ready.

20, HIGH HOLBORN, LONDON, W.C.

PARIS, 1900. *Highest Possible Award.*

JOSEPH GILLOTT'S PENS.

ONLY "GRAND PRIX"
Exclusively Awarded for Steel Pens.

Nos. for Bankers, etc.: Barrel Pens, 225, 226, 262. Slip Pens, 332, 909, 287, 166, 404, 601, 7,000. In Fine, Medium, and Broad Points.

THE NEW TURNED-UP POINT, 1032.

Of Highest Quality; and, having Greatest Durability, are therefore

CHEAPEST.

LIST OF ILLUSTRATIONS.

	Page.
Arbor Low	128
Ashwood Dale	118
Bakewell (General View)	146
Bakewell Church	150
Baths, The Buxton	98
Buxton College	85
Buxton (General View)	20
Buxton (from the Hydro)	60
Castleton	172
Chatsworth	140
Chee Dale	229
Chee Tor	108
Devonshire Hospital	92
Dovedale, View in	64
Dovedale	188
Downfall, Kinder	219
Edensor Church	144
Goyt's Bridge	246
Haddon Hall	150, 160, 162
Lovers' Leap	224
Ludchurch	214
Lyme Hall	204
Matlock Bridge	200
Matlock Dale	198
Pavilion—Conference Room	33
Peak Castle, Castleton	168
Poole's Cavern	64
Promenade in Gardens	76
Pump Room	102
Spring Gardens, Buxton	64
Tideswell Church	182
Topley Pike	234
Tor, Miller's Dale	240
Town Hall	70
Town Hall (from the Terrace)	106
Winnats	175
Views in Gardens	82, 83

The 'Simplex' Reading Stand

THE LATEST INVENTION.

Patented United Kingdom and Abroad.

ADAPTABLE TO ALL SCHOOL DESKS,

AND FOR GENERAL HOME READING.

No more straining and injuring of eyesight by books, copies, &c., being placed at wrong distances from the eyes.

All books, &c., can be arranged to suit each individual scholar.

Physical difficulties reduced to a minimum. The Children's eyesight has now become a National consideration.

COMPARATIVELY SIMPLE AND INEXPENSIVE.

☞ ***Call at our Stand for demonstration and Illustrated Catalogue (New Edition).***

MAGAZINE HOLDER Co.

50, Saville Street, LEEDS.

LIST OF ADVERTISERS.

PAGE

American School and College Text-Book Agency 26
Arnold & Son 8
Askew J. & Son 256

Bemrose & Sons Ltd 120
Blackie & Son Ltd 1
Bristol Correspondence College 71
Brown A. & Sons Ltd. 189
Burns & Oates Ltd. 89
Buxton, Derbyshire 93, 103

Chambers W. & R. Ltd. 8
Charles & Dible 165
Chapman & Hall 212
Clay C. J. & Sons 225
Clive W. B. 16
Coombs 22
Cormack John 257
Cowburn Anne 12
Crispin James & Sons 119

Diploma Correspondence College, Bristol 190
Dixon 104
Duckett 26

Educational Furnishing Co. Ltd. 3
Educational Newspaper Co. Ltd. 166
Epps 72
Eyre & Spottiswoode 137

Faber A. W. 77
Fisher, Son, & Weaver 110
Fleetwood & Co. 255
Fry & Son 94

Gillott Joseph 26
Ginn & Co. 18

Haddon Hall Hydro 255
Hammer George M. & Co. Ltd. 109
Harbutt William 238
Hardtmuth L. & C. 104
Heath John 205
Heywood John 12, 30, 32, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274
Hugon & Co. Ltd. 72

Jarrold & Sons 5
Jewel Pen Co. 205
Johnston W. & A. K. Ltd. 24
Jones & Attwood 3
Journal of Education, The 211

PAGE

London, Edinburgh, and Glasgow Assurance Co. Ltd. 264

Macmillan & Co. Ltd. 125
Macniven & Cameron Ltd. 264
Magazine Holder Co. 28
May William & Thomas Ltd. 205
Murby Thomas 263
Murray John 206, 207

Nelson Thomas & Sons 138
Newmann O. & Co. 4
Normal Correspondence College 275, 276
North of England School Furnishing Co. Ltd. 258, 259

Owen & Robinson Ltd 261

Palmer G. J. & Sons 126
Parlane J. & R. 17
Partridge S. W. & Co. 262
Perry Pens 9
Philip George & Son Ltd 90
Poole Cavern 189

Ralph, Holland, & Co. 78
Religious Tract Society 31
Remington Typewriter Co. . Second cover
Royal Hotel, Buxton 226
Ryde Percy W. 2

Schoolmistress, The 208
Scottish Provident Institution. Third cover
Sisson & Parker 12
Swan Sonnenschein & Co. Ltd. 6

Thornton A. G. 4

University Correspondence College, London 13

Walter Scott Publishing Co. Ltd., The 237
Welsh Educational Publishing Co. .. 7
Wild's Temperance Hotels Ltd. 260
Winsor & Newton 154
Wolff E. & Son 10
Woolley James, Sons, and Co. Ltd .. 153
Wright George & Co. 196

York & Son 9
York Stephen 72

JOHN HEYWOOD,

STALL No. 9.

Church, School & Office Furniture Manufacturer,

MANCHESTER.

Large catalogue, magnificently illustrated, 170 pages, free on application.
All Goods in the List are quoted at Net Prices.
Desks & Seats are delivered and fitted free of charge in Manchester district.

COUNTRY ORDERS. For the convenience of transit, Desks and Seats ordered for the Country will be sent in separate parts, as they travel much more safely with the Desk and Seat separate from the Iron Standards, and cost of conveyance is much less than when they are screwed together. Proper Screws and Bolts are forwarded with them so that any carpenter may put them together. If desired, skilled workmen will be sent, whose net time, railway fare, and expenses will be charged.

PACKAGES. Cases and Canvas are charged for, and the full price allowed for them when returned **Carriage Paid**. Customers should see that their name and address appears on all returns, and a note of advice sent by post.

All orders of the value of £10 and upwards will be sent Carriage Paid to the nearest Railway Station if there be a through rate. Where, however, the rate is in excess of 4O- per ton the difference will be charged.

When Schools require completely furnishing, or when large orders are given, Special Prices will be quoted free of charge.

Special Drawings prepared when desired at net cost, but full allowance made on receipt of order.

All Communications respecting Furniture of whatsoever nature should be addressed to

JOHN HEYWOOD, School Furniture Dept.,
DEANSGATE, MANCHESTER.

Will you, please,

LOOK

at the SCRIPTURE

CARTOONS

for SCHOOL WALLS,

and the BOOKS for

PRIZES

on the Religious Tract Society's Stall in the N.U.T. Exhibition in the Pavilion.

Chief Office: 56, PATERNOSTER ROW, LONDON.

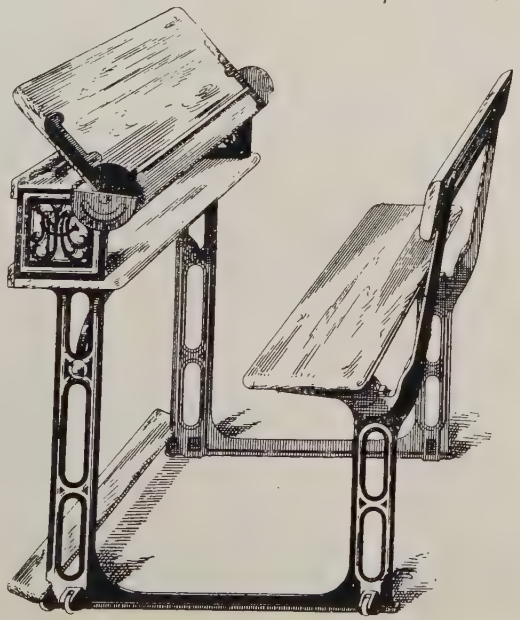
JOHN HEYWOOD'S NEW DUAL DESK.

— No. 33 B. —

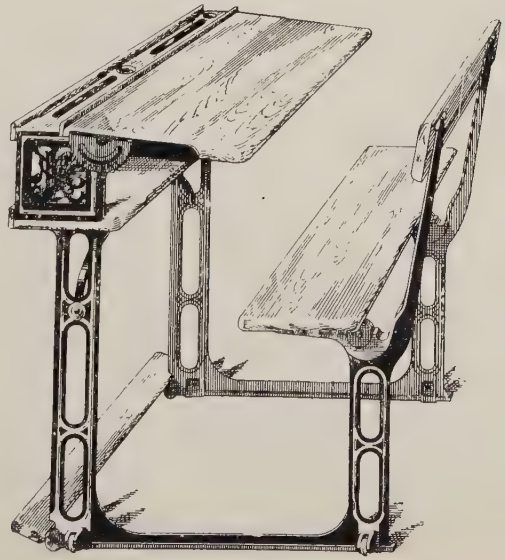
Is absolutely the best Dual Desk on the market. Made in 3 sizes.

Price **21/-** *each. In Pitch Pine, Varnished.*

SEE **J. H's** STALL (No. 9) in FURNITURE EXHIBITION.



John Heywood, Manchester—No. 33 B.



John Heywood, Manchester—No. 33 B.

The Pavilion, Buxton.

The Duke of Devonshire, K.G.
Lord President of the Council.

MRS BROWN.

CAPTAIN BROWN,
Chairman,
Buxton Urban District Council.

Photo. by *D. C. Latham, Buxton.*

Mr. Victor Cavendish, M.P., Bakewell Division.

Photo. by *Gabell, London, S.W.*

Mr. Oswald Partington, M P., High Peak Division.

The Lord Bishop of Southwell,
The Right Rev. G. Riddings, D.D.

Rev. C. C. NATION, M.A.,
Vicar of Buxton.

Rev. J. EAVRS,
Vicar of Fairfield.

Rev. J. S. PAWLYN,
Superintendent Wesleyan Minister.

Rev. R. REW,
Congregational Minister, Member of Buxton School Board.

Mr. J. Willoughby,

Chairman, Buxton School Board.

Mr. H. A. Hubbersty, J.P.,
Senior Magistrate; Chairman, Hartington Upper Quarter School Board.

Mr. Samuel Selby,
Vice-Chairman, Buxton School Board.

Mr. R. A. Little, LL.D.,
Headmaster, Buxton College.

Mr. E. C. Milligan,
Chairman, Technical Education Committee.

H. F. Dibben, Esq.,

Chief Inspector of Schools, North Central Division.

Mr. W. T. Meggs,
H.M. Sub-Inspector of Schools.

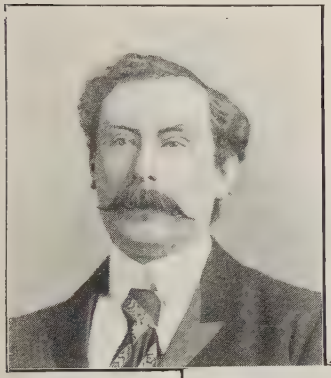
Mr. J. W. Brigg,
H.M. Sub-Inspector of Schools.

Mr. W. Burton,
H.M. Sub-Inspector of Schools.

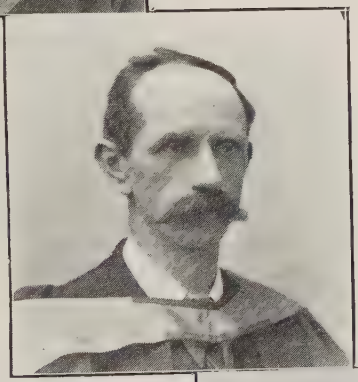
Mr. W. H. Roberts,
H.M. Sub-Inspector of Schools.

MR. E. HALL,
Chairman,
Conference Committee;
President,
Buxton Association.

MR. J. W. SOUDEN,
Treasurer,
Conference Committee;
Secretary,
Publishers' Exhibition Committee.



Mr. A. W. Moody,
Vice-Chairman,
Conference Committee.



Mr. J. H. Gregory,
L.V.C.M.,
Secretary,
Conference Committee.

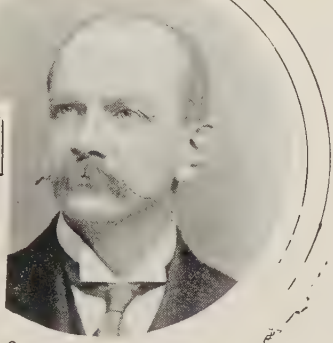
Mr. J. W. Hick.
Secretary,
Conference Committee.

Mr. W. Broadbery,
Chairman,
Reception and Dinner Committees.

Mr. H. Caldecott,
Vice-Chairman,
Reception Committee.

Mr. H. M. Hall,
Secretary,
Reception and Dinner Committees.

Mr. T. Perkins,
Chairman,
Publishers' Exhibition Committee.



Mr. Edwin J. Roberts,
Chairman,
Benevolent Purposes Committee.

Mr. W. B. Steer,
Vice-Chairman,
Benevolent Purposes Committee.

Mr. J Easton Bolton, A.C.P.,
Treasurer,
Benevolent Purposes Committee.

Mr. H. Morrell,
Secretary,
Benevolent Purposes Committee.

Mr. STUBBS,
Chairman,
Press Committee.

Mr. G. H. MATHER,
Vice-Chairman,
Publishers' Exhibition Committee.

Mr. J. A. NICHOLS,
Vice-Chairman,
Press Committee.

Mr. A. WALKER,
Secretary,
Press Committee.

Mr. D. Goodwin,
Chairman, Excursions' Committee.

Mr. Rowlands,
Vice-Chairman, Excursions' Committee

Mr Fisher,
Vice-Chairman, Dinner Committee.

Mr. T. Beardwood,
Secretary, Excursions' Committee.

Miss BARBER,
Vice-Chairman,
Ball Committee.

Mr. WATERFALL,
Chairman,
Ball Committee.

Miss S. C. HAY,
Secretary,
Ball Committee.

Mr. H. NEEDHAM,
Chairman,
Visitors' Ticket Committee.

Miss JEFFERY,
Chairman, Ladies' Committee.

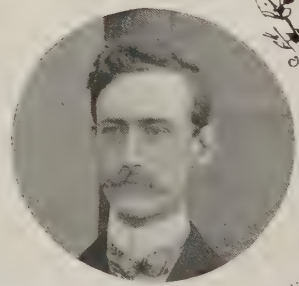
Miss RADFORD,
Vice-Chairman, Ladies' Committee.

Miss RHODES,
Secretary, Ladies' Committee.

Miss JACKSON,
Secretary, Benevolent Purposes Committee, Buxton.

Mr. J. Bloodworth,
President
Burton-on-Trent and District Association, N.U.T.

Mr. Henry R. Harvey,
President,
Derby Association.



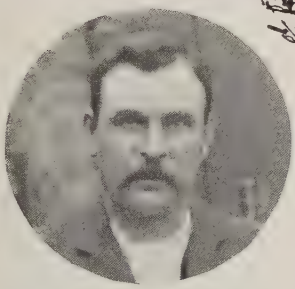
Mr. H. W. Day,
President,
Swadlincote Association.

Mr. T. Horsley,
President,
Erewash Valley and Ripley Association.

PRESIDENTS OF DERBYSHIRE ASSOCIATIONS.

Mr. Sydney Steele,
President,
East Derbyshire Association.

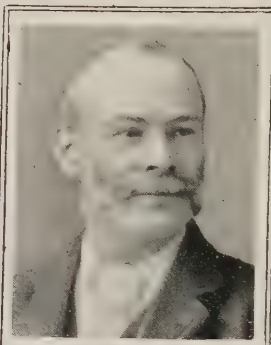
Miss A. E. Sutton.
Belper Association.



Mr. R. Owen,
President,
Matlock and Bakewell
Association.

Mr. R. Burrell,
President,
Ashbourne Association.

NORTH MIDLAND DISTRICT MEMBERS OF EXECUTIVE.



Mr. R. N. Lewis,
Boulter's School,
Langworth, Lincoln

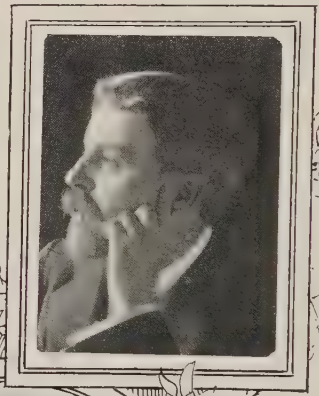
Miss A. G. Selvage,
Hainton, Lincoln.

Mr. G. Baddeley,
Burslem.

Mr. C. James,
Assistant Secretary, N.U.T.

Mr. G. M. E. Hamilton, F.E.I.S.
Treasurer, N.U.T.

Mr. B. South,
Chairman of General Council of Benevolent Funds.



Mr. J. H. YOXALL,
M.A., M.P.,
General Secretary,
National Union
of Teachers.

Mr. T. J. MACNAMARA,
LL.D., M.P.,
Editor of "Schoolmaster."

Mr. ERNEST GRAY, M.A., M.P.,
Secretary,
Education Committee, N.U.T.

Mr. Harry Coward, F.E.I.S.,
President

LADY NEWTON,
Purse Receiver.

Lord Newton.

Photo, by BUXTON (FROM THE HYDRO). *D. C. Latham, Buxton*

BUXTON.

By John Brandreth.

Peakland is relatively but a small portion of the surface of England, not much more than, say, a quarter of one medium-sized county, or about three hundred square miles. But for an almost inexhaustible store of interest for the lover of natural objects, it is not surpassed by any larger or bolder-featured district within the country. It is in accordance with the fitness of things that Buxton, the Capital of Peakland and the rendezvous of most Derbyshire tourists, should possess a favoured situation. And such, indeed, is the case. The town lies in a deep basin, varying in places from 1,000 to 1,150 feet above sea level, surrounded and sheltered by a girdle of undulating upland out of which rises Axe Edge (1,751 feet), and near to which stands the "Cat and Fiddle," renowned as the highest public-house in England.

Those natural advantages have been improved by a judicious system of management, so far as artificial means are capable of enhancing the fairness of Nature. A bird's-eye view from one of the headlands overlooking the town amply reveals this. The place has an appearance of harmony and regularity, not arising from a geometrical arrangement of streets and buildings, but produced by a wise forethought in placing like beside like and protecting the

substantial and ornamental from a too close association with conceptions of a commoner type. The buildings are of stone, which emphasises the solid appearance of the place. The visitor will be struck by the number, relatively, of large erections, public and otherwise, gathered in so small a compass.

At the present time Greater Buxton, in round numbers, contains a normal population of 13,000. Comprehended under the name are—

(1) Buxton,
(2) Burbage,
(3) Fairfield.

Fairfield is a separate Local Government district, although for practical purposes an integral part of Buxton.

ANCIENT BUXTON.

To begin at the dawn of local history, it would be necessary to go back to those early centuries of the Christian era, when the Romans occupied Britain. Granted we have no express record of Roman connection with the place put down for us in contemporary Latin. But we know, from the fortified camps and earthworks which abound in northern Peakland that this rugged locality was at that time occupied in military fashion; and further, that some of the military stations had roads leading to Buxton. "Batham Gate," or "The Bathway," is the name given to one of these roads to-day. Roman bricks and tiles, Roman coins and the remains of the ancient bath which have been discovered (and unfortunately destroyed), all

indicate that Buxton, like Bath, was a health resort in the days of the Cæsars. After the abandonment of the Roman occupation the town sunk into insignificance for a thousand years or more. North-western Peakland became a royal forest; the King's deer overran the Wye Valley, congregating for shelter in winter time in the Buxton basin, and gratefully drinking the warm water which trickled from the springs to the river. These animals are to-day commemorated in our municipal name and coat of arms.

There is no doubt that during the Middle Ages some tradition of the efficacy of the waters existed. In fact there is proof that such was the case. Buxton then was (as it continued to be up to a few years ago) within the boundaries of the Parish of Bakewell, and the little Chapel, dedicated to St. Ann, the patron of cripples, was a shrine ornamented with the votive offerings of the convalescent. It is suggested that the manner of the cure was ingeniously managed in such a way that Mother Church got the credit for it. That, at any rate, was the conviction of Sir William Basett, one of the commissioners of Buxton Wells in the olden time.

This valiant knight found the walls of St. Ann hung with "crutches, shirts, and shifts," which he at once confiscated as "being things that allure and entice the ignorant to the said offering." He also removed the image of St. Ann "in as sober a manner as my little and rude will would serve me," and forwarded it as evidence to Lord Cromwell; and, finally, he locked up and sealed the baths and wells. The water was relieved from this embargo in due course, but the Reformation totally deprived it of all virtue it had hitherto derived from priestly assistance. St. Ann was deposed, and the new Chapel was dedicated to St. John. About half a century after the abolition of

W. Pilkington, Photo Chemist, Buxton.

the well shrine Queen Elizabeth was on the throne, and Mary Queen of Scots a prisoner at Chatsworth, in charge of the Earl of Shrewsbury, Lord Lieutenant of Derbyshire, and Bess of Hardwick, his wife. It is about this period that one is first able to ascertain from contemporary testimony something of the status and reputation of Buxton Wells in the olden time.

The Scottish Queen apparently found the seclusion of Chatsworth very irksome, and accordingly, in 1573, set her mind upon paying a visit to Buxton. Like many ladies who have lived since her time, she pleaded medical reasons as a reason for getting her own way. Queen Elizabeth appears to have had her doubts as to the *bonâ-fides* of her royal cousin, for she wrote to the Earl of Shrewsbury, through Sir Francis Walsingham, for his opinion as to the necessity of such a journey. Shrewsbury's reply is very guarded. He says:—

"I can saye lyttell of the state of hur boddy; she semes more helthfull now, and all the last yere past, than before; she hath very myche used baning (bathing) wt yerbes (herbs) nowe of late, as she hath done other yeres; what nede she hath of Buxton well I know nott further than I have here wrytt."

She then suggests that the decision should rest with Lord Burleigh, who was a visitor to the neighbourhood, and to others of the Privy Council. Probably Lord Burleigh's influence went in favour of the royal invalid. At any rate, permission was given for Mary to travel to Buxton, and the Lord Treasurer's instructions to the Earl of Shrewsbury were that she should make her journey under escort as secretly as possible, and that during her stay in the town no strangers were to be permitted to remain therein. The reason assigned was that "Her Maty. was very unwylling yt she should go thyther, imagining yt

hir desyre was ether to be the more sene of strangers resortying thyther, or for ye acheving of some furder enterprise to escape."

Queen Mary's holiday apparently passed off without disastrous consequences to anybody; yet not without some mischief-making reports concerning it being conveyed to the Court of Elizabeth. It was alleged by the spies who dogged this unfortunate woman and her keeper at every step that the Earl of Shrewsbury had allowed Mary too many opportunities of associating with strangers. The Earl, in a letter to Lord Burleigh, accordingly explains an incident which he imagines gave rise to the story, and it is a curiously suggestive and characteristic one. A lame woman happened one day to be in the same building as the Queen. Mary's party were evidently solacing themselves with the newly-discovered weed which Sir Walter Raleigh had brought over from the West Indies, when the lame body "desired some good gentylwoman to gyve her a smoke; whereupon they putt one of their smokes out of a hole in the walle to her." This trivial action we mention, not to illustrate the negligence of the noble Lord Lieutenant, but to emphasise once more the assertion that there is nothing new under the sun. It should be noticed that the Earl, in his letter, does not specify in what form the tobacco was used; he merely says that the ladies presented the woman with "a smoke." Such, we believe, is still a comprehensive colloquial term for the article.

The royal party paid a second visit in 1576, and a third in 1580. Each time the captive was under the strictest surveillance, and the Lord Lieutenant is most painstaking in his assurances to the Privy Council that every vigilance is used to keep Mary isolated. In 1582 he accompanied her again for the fourth and probably the last time. It was perhaps on this occasion that she wrote with a

diamond those lines on the window of her lodgings at the Old Hall—

"Buxtona, quae calidae celebrabere nomine lymphae,
Forte mihi posthac non adeunda, vale!"

which may be rendered—

"Buxton, whose fame thy milk-warm waters tell
That, I perhaps, no more shall see, farewell!"

The presence of Mary in Derbyshire, and her occasional residence in Buxton, seems to have stimulated an interest in the curative properties of the waters. Lord Burleigh became a fairly regular visitor about this time, so much so that Elizabeth was jealous of his excursions thither, fancying, no doubt, that a most staunch and trusted pillar of her government might be, or was being, seduced from his allegiance by her cousin of Scotland. In 1576, the year of Mary's second visit, Elizabeth herself, during a royal progress, halted three weeks in the neighbourhood of the town in order that the Earl of Leicester might have the waters brought to him daily, the doctors having ordered that "he must drynke and use Buxton's water twenty dayes together."

In 1577 Burleigh, with the express permission of the Queen, paid another visit to Buxton. How he was wont to apply the cure is set forth in a letter to the Earl of Sussex.

"I cum hither on Sunday last at night, took a small solutive on Monday; began to Tuesday, yesterday I drynk of ye water to ye quantity of 3 pynts at 6 draughts; this day I have added two draughts and I drynk 4 pynts, and to-morrow am determyned to drynk 5 pynts, and mixt with sugar I find it potable with pleasure even as whey. I meane, not to bath these 8 dayes, but wyll contynew drynking 10 dayes."

The Lord Treasurer is therefore entitled to be considered a great historical figure, with a good internal capacity. Yet his friend and colleague, the Earl of Sussex, the Lord Chamberlain, must have excelled him in this respect. Writing to Lord Burleigh on August 7th, 1582, he says:—

"The water I have drunke liberally, begynning with thre pynts, and so encreasyng dayly a pynt I come to 8 pynts, and from thens descendying dayly a pynt till I shall ageyne returne to 3 pynts, wch will be on Thursdye next, and then I make an ende."

The simple progression of the noble patient enables us to compute with certainty the exact amount of water he consumed. It was no less than twenty-nine quarts in eleven days. As an individual record it is not bad; but it is only a drop compared with the aggregate annual swallow of the Buxton visitors to-day—one million glasses.

Our Elizabethan ancestors were so eminently practical that they left no record of the style or size of the Buxton of their day. They took advantage of the waters, and cared but little for the scenic surroundings or opportunities of public enjoyment. A safe journey, a good lodging, and a lasting cure were the three things they desired. Dr. Jones, a local practitioner and the contemporary of the great folks we have just been mentioning, gives homely commendation to the Old Hall (the predecessor of the present building), then recently erected by the Earl of Shrewsbury. "A very goodly house, foure square, foure stories hye, so well compacte with houses of office beneath, and above and round about, with a great chambre and other goodly lodgings to the number of thirty; that it is, and will be a bewty to beholde."

This was the one and only house of entertainment. The worthy doctor also summarises other conveniences,

which nowadays would be considered absolute necessities, but which he evidently accounted sybaritical. "The baths also so beautified with seats round about; defended from the ambyent ayre: and chimneys for fyre, to ayre your garments at the bathes syde."

For occupation and amusement he recommends the gentlemen to exercise themselves with bowling, shooting at the butts, and "tossing the wind ball." The ladies are counselled to take advantage of even more tame enjoyments. "The ladyes, gentlemen, wyves and maydes, maye, in one of the gallaries walke, and if ye weather bee not agreeable to theire expectation they may have in the end of a bench eleven holes made, into whiche to trowle pummetes or bowles of lead. . . . . Likewise men feeble, the same way also practise in anothr gallary."

"I do not wish to be amused," wrote Emerson. So said these ancient folk. And for several centuries after Queen Mary and Burleigh and Sussex had drunk their last "pynt" our visitors came to the well solely to be cured, and the prosperity of Buxton slept in the womb of the future.

MODERN BUXTON.

The modern history of the town may be said to date from the year 1780, when William Cavendish, the fifth Duke of Devonshire, began the erection of the Crescent. The growing use of stage coaches resulted in the conversion of the hitherto almost impassable drift ways and pack horse trails of England into roads. Travelling had become more safe and more common, and one outcome of this was the inland pleasure resort. Bath and Chelten ham were the rendezvous of society folks, and the fifth Duke of Devonshire, then a very young man of the

Photo by TOWN HALL (FROM THE MARKET PLACE). *Steward & Co., Buxton.*

B. C. C.

OVER 900 SUCCESSES.

ART: 68's and Scholarship Failures.

Only four subjects. **12/6 per Term.**

SCHOLARSHIP.

15/- per Term. **40/- Full Course.**

B.C.C. Students, after failing four times under other tuition, have been successful.

No B.C C. Student, after taking our Full Course by correspondence, has ever failed.

CERTIFICATE.

15/- per Term. **40/- Full Course.**

No B.C.C. Student by correspondence has ever failed.

A. C. P.

20 - per Term. **Special Terms for 1904 Exams.**

L. L. A.

Special Terms for next Exam. *Apply immediately.*

LANGUAGES.

Greek, French, Latin ... ... 9/6 per Term.

***£5** will be given to anyone sending the name of a B.C.C. Student who has ever failed after taking the Full Course in Scholarship, Certificate, or A.C.P.*

Apply to Principal (Professor DEACON), or Secretary (A. E. LEWIS, Esq.), Bristol Correspondence College, COTHAM, BRISTOL.

TEACHERS are invited to send for particulars of

THE COPYRIGHT

"MEMORANDA" SERIES of

DAY SCHOOL REGISTERS

CHART ETC.

Postal Address: STEPHEN YORK, 40, Princes Street. KETTERING.

Grateful to the Palate—Comforting to the System.

EPPS'S COCOA

Is just the Cocoa that Teachers each day require

MOST NUTRITIOUS & ECONOMICAL

Early in the day, to fortify for its Mental strain. Later on, after day's work is over, to secure due repose.

Of Grocers, ¼-lb. Packet, **3½**d.

HUGON'S

Supersedes Raw Suet, Lard, and Cooking Butter for Puddings, Cakes, Mince Meat, Pie Crust, Frying and Cooking. Made from best English Beef Suet only! Saves trouble of Chopping! One pound goes as far as two pounds of Raw Suet! Always sweet!

"ATORA"

OF ALL GROCERS AND PROVISION DEALERS.

Sole Manufacturers—

HUGON & Co., Ltd., PENDLETON, MANCHESTER.

SPECIALLY PACKED FOR HOT CLIMATES.

BEEF SUET

exclusive and fashionable set, sipped his water and foregathered with the fops and dandies who were setting the fashion and creating the reputation of the English Spa. Our Duke did more than this however. He recollected that away in the rugged fastnesses of the Peak he was the owner of waters just as efficacious as these, comparatively unknown to the world of fashion because the rude accommodation of Buxton village offered no hospitality to those who sought entertainment as well as medicinal treatment.

As we have already seen, the only house of any pretension in Buxton was the Hall, which had been rebuilt in 1670; this His Grace proposed to enlarge, and also to erect some buildings on the higher ground, probably on the then recently enclosed common land in the neighbourhood of the present Parish Church. To do this it was necessary to consolidate his estate by purchasing plots belonging to several small owners.

The trees which fringed the riverside from the Hall to the present site of Spring Gardens were cut down, and as a nucleus for the new town which was in course of time to spring up, the palatial "Crescent" was erected, together with the block of stables near thereto, afterwards converted into the Devonshire Hospital.

Such was the beginning. Much remained to be accomplished before the hard features of the landscape could be said to be greatly improved. Miles of unfenced land reaching to the verge of the Wye, bearing little but heather and scrub, and entirely destitute of trees, made touring and sightseeing a dreary and monotonous task. One has an expressive picture of the neighbourhood in the lines of a contemporary rhymester:—

"Far as the eye could reach no trees were seen,
Earth clad in russett, scorned the lively green."

Presently the Inclosure Acts were put into operation, and newly-erected limestone fences, lacing and interlacing, lent some variety and gave an air of cultivation to the scene. Better still, plantations were made upon the steeps and in the ravines, with the result that places like Ashwood Dale and Lover's Leap, Grinlow, and the Burbage side, which only elicited such expressions as "horrid" and "terrible" from the Picturesque Tourist of the eighteenth century, are now in their clothing of foliage foremost among the attractions of the neighbourhood.

Nearer the town itself the Duke continued the work of ornamentation. St. Ann's Cliff, which for some time after the erection of the Crescent remained a shapeless and unsightly knoll, was graded and laid out in curved lines under the direction of Sir Geoffrey Wyattville.

The present Parish Church of St. John was built at the cost of His Grace, and opened a year after his death, in 1811. It is a fine piece of work, admirably designed in the classic style, and, like the Crescent, was built with a liberal regard to future needs and requirements. The Duke's Drive was also constructed about this time, by means of which a circular tour of the town could be made on foot or on horseback.

Such was the modest welcome offered by Buxton to visitors in the Georgian age. The chief entertainment lay in short excursions, in exchanging calls, and in the chastened dissipations of our Assembly Room and Theatre.

We have not yet referred to what is really, after all, the old town, viz., Higher Buxton. In ancient days the moorland side crept down to the foot of St. Ann's Cliff. On the plateau beyond the Cliff, and away from the steam and fog arising from the warm water, was the village proper, clustered round what is now the Market Place, passing down High Street and along the main road from London.

None of the buildings at present standing are of much antiquity, but the evidences of ancient settlement and ownership are everywhere patent enough—narrow byways, small cottages, homesteads owning no allegiance to any line of frontage, and immemorial windows, peeping over adjoining premises in defiance of all law as to trespass of light. St. Ann, the Mother Church, situated at the extremity of High Street, is successor to the well shrine, which was in the Reformation age under ban for superstitious practices. The reformers, by establishing the new sanctuary on its present site, removed to some extent the temptation of the parson to "bless" the waters, and at the same time placed it in a more central position for the parishioners. Their Protestant zeal likewise caused the dedication of the new church to be to St. John the Baptist. After the present Parish Church was erected in 1811, however, the ancient name was revived, and is now commonly used. Although Higher Buxton did not particularly fall within the scope of the Duke of Devonshire's improvements he provided one large and comfortable hostelry by re-building the Eagle Inn.

Another notable event in the progress of the town was the erection, also by the Duke, of new bath buildings, about the middle of the last century. In the rude ages, when the water ran free and open, rich and poor alike probably descended into the same pool. The difference in degree was, within more recent times, marked to this extent, that for paying bathers there was one bath for men and one for women, and for non-paying bathers one only for both sexes. In Elizabethan times the invalid poor had so increased in numbers as to become very embarrassing guests, for, of course, they travelled without purse or scrip. In the 39th year of Elizabeth, some remedy was provided for this by an

Photo. by PROMENADE IN GARDENS, BUXTON *Mr. D. C. Latham.*

A. W. FABER,

149, QUEEN VICTORIA STREET, LONDON, E.C.

A. W. Faber's Pencil Manufactory. Established 1761.
Houses in London, Paris, Berlin and New York. Gold and First-class Prize Medals.

GRAND PRIX (Highest Award), PARIS, 1900.

Superior Lead and Coloured Pencils.
Rulers, T-Squares, Calculating Rules, &c
Artists' Materials.
Stationers' Rubber Goods.

A. W. FABER'S Productions may be obtained through all Stationers or Artists' Colourmen.

PARTICULAR ATTENTION is called to the Trade Marks of A. W FABER, consisting of the initials **A. W. F.,** or the name **A. W. FABER.**

Note the Initials A. W. No goods are of A. W. FABER'S manufacture if marked with the name of FABER coupled with any other prefixes.

The "Independent" Stylographic Pen.—The most perfect and popular pen of this kind in existence. The genuine pen is only supplied in boxes bearing A. W. Faber's label.

Messrs. RALPH, HOLLAND & CO.'S

Recent Publications.

ELEMENTARY SCIENCE.

New and Revised Edition. By J. H. NANCARROW, Author of "Science Note-Books." **Price 3s. 6d.**

ELEMENTARY LOGIC.

A New, Revised, and Enlarged Edition of "Logic and Education." By Rev. JOHN LIGHTFOOT, M.A., D.Sc., First in Honours, Mental and Moral Science. **Price 1s. 6d.**

SHAKESPEARE'S "RICHARD III."

By W. H. S. JONES, M.A., Classical Professor at Stonyhurst College. **Price 2s.**

THE HYGIENE OF SCHOOLS & SCHOLARS.

By Dr. H. BEALE COLLINS, D.P.H., Medical Officer of Health to the Borough of Kingston. **Price 2s.**

SHAKESPEARE'S "AS YOU LIKE IT."

By ALFRED L. CANN, B.A., Principal of the Bolton P.T. School. **Price 2s.**

SHAKESPEARE'S "HENRY V."

By C. W. CROOK, B.A., B.Sc., Head Master of the Higher Grade School, Wood Green, London, N. **Price 2s.**

***** A complete Catalogue of valuable Works for Student Teachers will be forwarded, post free, on application.**

TO BE OBTAINED THROUGH ALL BOOKSELLERS,
OR POST-FREE AT PUBLISHED PRICES FROM . .

RALPH, HOLLAND & Co., Educational Publishers,
69, Temple Chambers, London, E.C.

enactment "that none resorting to Bath or Buxton wells should beg, but should have relief from their parishes, and a pass under the hands of five Justices of the Peace, fixing the time of their return, nor were they to beg there under pain of incurring the penalties of that Act." Prior to the Reformation it is likely that a portion of the offerings made to St. Ann would be applied towards the assistance of this class.

Soon after the abolition of these offerings, and as early as the reign of Elizabeth, there appears to have been a charitable fund called the "Treasury of the Bath." The earliest extant statement of accounts of the Bath Charity, however, is the report of 1785. From that time onward the growth of this noble foundation can be traced. The funds, following ancient precedent, were for a long time collected by means of a levy upon the visitors, the hotel and lodging-house keepers having collecting books, to which each visitor was expected to subscribe not more than one shilling. These contributions enabled the committee to pay six shillings weekly towards the maintenance in lodging of those who could obtain a recommend for a course of baths, the use of the waters and medical attendance being in addition provided free of cost. As an indication of the magnitude of the Bath Charity in bygone days it may be mentioned that between 1820 and 1858 nearly forty thousand patients were admitted to the benefits of the charity. As time went on the influx of poor visitors grew apace alongside the growing prosperity of Buxton. The committee of the Bath Charity also began to realise that the benefits of the baths would be enhanced if some, at least, of the patients were kept together and under supervision during their course of treatment, for the distance which many of the poor cripples had to walk to their cheap lodgings in Burbage and Fairfield often

nullified the good effects of the treatment. Accordingly, at a meeting of subscribers, held at the Crescent Hotel in 1854, and presided over by Sir Edward Bulwer Lytton, Bart., M.P., it was determined to raise a sum of £2,500 for the purpose of providing a building. Eventually the Duke of Devonshire handed over to the trustees a portion of that range of buildings known as the Great Stables, which we have already mentioned as coeval with the erection of the Crescent. These premises, altered and adapted, were, in 1858, opened as "The Devonshire Hospital," with 130 beds. The last half century has marked a noticeable increase in the growth of the town, and one is thankful to say the same of the work and usefulness of the Hospital. Gradually, and as occasion required, the Duke of Devonshire gave to the trustees more of the Crescent Stables, until, in 1881, the last great extension was completed by means of his generosity, and by a grant of £24,000 from the Cotton Districts Convalescent Fund. Now there is accommodation for 300 patients. The buildings are grouped round a circular space half an acre in extent, which has been covered with a dome believed to be the largest in the world. In this magnificent hall, which is warmed and lighted, the patients can take exercise irrespective of the weather.

Still the work of the charity continues to grow in bulk and detail. The most recent development is an accident ward for local cases. According to last year's report 70,373 cases out of the whole total are entered as discharged cured or relieved since 1858. The organisation of the hospital is a national one, and the funds are contributed from every part of the kingdom. The annual report of the Governors is literally a directory of place names and trade names, embracing donors and patients from nearly every county in the kingdom, and drawn from every walk in life.

As Buxton steadily progressed the economy of the place also underwent a change. In 1841, with a population of 1,569, the primitive means of water supply and sewage disposal were no doubt adequate enough. But about twenty years later the Duke of Devonshire found it necessary to provide a new water supply, and directly afterwards Mr. (afterwards Sir Thomas) Rawlinson carried out the first sewage scheme. The old theatre disappeared, another was not built until 1889. The races, held annually on The Barms, at Fairfield, were likewise abolished in the forties, a loss which was a gain to the town and its reputation as a resort for invalids. Some further attractions were added, as, for instance, the half mile of pleasure grounds, which stretched by the river side from the front of the Old Hall Hotel, and in which an orchestra, kept at the expense of the Duke, used to play during the season.

In 1858 the township of Buxton was formed into a Local Board District, under the new Local Government Act.

There was yet one thing required to increase its speed along the path of progress—the advent of the iron horse. Railway projectors were chary of attacking the steep gradients of Peakland, and it was not until the sixties, and at about the same time, that the London and North-Western and the Midland Railways found their way to Buxton. On the former line a branch was first constructed from Stockport to Whaley Bridge (seven miles from the town), and finally to Buxton. The North Midland (as it was then called) approaching the place from the south, extended its length from Ambergate to Rowsley, and thence to Miller's Dale, from which point, on the main line from the south to Manchester, a branch of five miles to Buxton was made. This last stage, running through the Wye valley, traverses scenery of an unrivalled character, without, in

the opinion of many, disfiguring it. Mr. Ruskin, however, is said to have held a contrary opinion, alleging that the landscape had been ruined "to enable a fool at Buxton to be at Bakewell twelve minutes later." It soon became plainly apparent that visitors were increasing by leaps and bounds, and that the power of numbers not only inflated the purses of the inhabitants, but stimulated them

VIEW IN THE GARDENS.

to independent exertion. More first-class accommodation being needed for the influx of guests, it was provided by a public company. In 1868 the Palace Hotel, which has cost altogether a sum approaching £100,000, was opened, and numerous blocks of lodging-houses on the Broad Walk and St. John's Road sprung up at the same time.

The arrival of the railway-borne visitors demonstrated another thing. It became apparent that, besides housing them, they would have to be provided with something more than already existed in the way of popular amusement. It was not everyone who cared to spend an entire holiday on the slopes, or parading in the Colonnade or Serpentine Walks, listening to the little band. The

VIEW IN THE GARDENS.

Assembly Room in the Crescent, the largest room in the town, was neither adapted nor intended for popular performances of any magnitude. In short, there existed no opportunity of properly catering for the leisure of the visitors. This drawback was taken into consideration by some leading local men with whom the Duke was in

Photo. by BUXTON COLLEGE. *Mr. D. C. Latham.*

hearty sympathy. The result was the formation of the "Buxton Improvements Company," to which, in 1871, His Grace conveyed twelve acres of the Serpentine Walks. This they enclosed and laid out as ornamental gardens, and a pavilion of iron and glass, 400 feet long, was erected. The structure was enlarged five years later by the addition of a concert hall, seating altogether 2,000 persons, and subsequently the grounds were rendered more extensive by adding further portions of the Serpentine Walks. The frontage between the Pavilion and the river was laid out as a promenade, and indoor or outdoor during the season the Gardens' Band, which has earned for itself a leading place among English orchestras, performs twice a day.

It is not necessary to enumerate the various auxiliary forms of entertainment afforded by the Buxton Gardens Company. Suffice it to say, the directorate have avoided all cheap and vulgar attractions of the hour, and have sought to make the grounds a congenial retreat for persons of refined tastes. The accelerated growth of the town has rendered further extension necessary, and this year a new entrance corridor and opera house, involving an expenditure of between £20,000 and £30,000, have been erected.

BURBAGE.

In a letter, dated 1810, a lady visitor to Buxton writes as follows: "We visited Poole's Hole in the forenoon, and took a ramble among the lime houses. What wretched habitations are these for beings of the human kind!"

Nowadays a similar excursion would be properly described as a visit to Burbage. The lime houses, we should hasten to explain, have long disappeared, but the lime ashes, out of which they were constructed, have

increased by thousands of tons, ranging like chalk cliffs against the sky line, a token of the one industrial enterprise which the neighbourhood possesses. Limestone has been quarried at the Grin and Harpur Hill works for many generations, and for about half a century on a scale of such magnitude as to make Burbage a considerable village. This outlying flank of Buxton is one hundred feet higher than the level of that town itself, and being on the edge of the moorland which extends to Macclesfield and Leek, is correspondingly bracing and salubrious.

Most visitors make the acquaintance of Burbage by passing through it on the way to Axe Edge and the Cat and Fiddle. It may also be inspected at the same time as the visit to Poole's Cavern, that great aperture under Grin Low which was anciently accounted one of the wonders of the Peak. This may now be explored by gaslight and dry shod any day of the week, Sundays excepted. Close to Poole's Cavern stands Buxton College. A brass in the large hall of the school records that about 1674 a sum of £300 was subscribed and invested to produce £15 per annum, £12 of which was for "ye schoolmaster of the said towne (Buxton) teaching Latin, English, and Handwriting." About the close of the eighteenth, and the beginning of the last, century an accident common to many scholastic charities about that time, befel this one. Some dispute arose, which awaited so long the decision of the Lord Chancellor, that in the mean time the lands of the charity increased sixfold in value; the school was shut up during the litigation, and the revenue invested at interest. It did at last, however, get into working order, and provided elementary education for the town of Buxton until the formation of a School Board soon after the passing of the Act of 1870. The Governors of the Charity there-

upon submitted a scheme to the Charity Commissioners, and the present school was built out of the funds, scholarships being provided for the children of the elementary schools in Buxton. During the *régime* of the present head master, Dr. Little, Buxton College has become an exceedingly popular and prosperous county school.

The pretty Church of Burbage was built in 1861, when a parish was carved for it out of that huge territory—the Parish of Hartington.

FAIRFIELD.

Last in sequence, but by no means the most inconsiderable part of Greater Buxton, is Fairfield.

Ancient Fairfield was a small village, quite detached from Buxton, and about three-quarters of a mile from the Baths. Fifty years ago the township contained 600 people; now there are nearly ten times that number (5,274 at the last census).

The steep hillside lying between the two places which, not many years ago, was pasture ground, is now covered with houses, forming a solid and substantial eastern flank of Buxton proper. The historical interest possessed by Fairfield is not evidenced by many outward indications. The present Church of St. Peter, literally founded upon a rock (with a tower which forms one of the prominent features of the landscape), was erected so recently as 1839, and enlarged only last year. The earliest building, however, was erected in the thirteenth century, and, after several vicissitudes, was, with the graveyard, closed for a time by Queen Mary, as a punishment for the attachment of the inhabitants to the reformed faith. The villagers stood by their convictions, and Thomas Dakin provided them with a conventicle and burying ground on his own

estate, about a mile distant from the church, where Divine worship was conducted in defiance of the vigorous emissaries of the Roman Catholic Queen. The building in which tradition says these services were conducted is still standing, and used as a barn. Half a century later, after Protestantism became once more in the ascendant, the old Church was found to have fallen into such decay as to be unfit for use, and the inhabitants are stated to have become so impoverished by the necessity of providing for the wants of the pauper cripples, who resorted to the baths, as to be unable to restore it. The necessary funds were, however, by means of a certain arrangement, raised, and the restored building served its purpose until demolished to make room for the present edifice. Near the church are the Endowed Schools, which provide wholly for the education of the children of the place. The endowment consists of land, which, of late years, has been largely required for building purposes, and therefore yields a considerable revenue.

Fairfield is perhaps best known to outsiders as possessing that rarity and an increasing rarity—a large space of unenclosed land. "The Barms" is a broad area of nearly one hundred acres in extent, around which all that was once Fairfield is grouped. This undulating stretch fulfils so many beneficent purposes that it may safely be said no other pasturage in the county performs such a multitude of useful offices. Formerly it was the Buxton race-course; now, besides supporting its quantum of cattle and sheep, it acts as a sort of public park. It has limestone quarries for road making and building. Moreover, it is also the town playground, and as part of the course of the Buxton and High Peak Golf Club is appreciated as providing some of the finest inland links in the country.

BURNS & OATES, Ltd.,

Educational Publishers, &c.,

28, Orchard Street, LONDON, W.

THE GRANVILLE READING BOOKS.

THE GRANVILLE HISTORY READERS.
THE GRANVILLE POETRY BOOKS.
THE GRANVILLE SIXPENNY ATLAS.
THE GRANVILLE QUARTERLY EXAMINATION BOOKS, Etc.

Illustrated Prospectus and full particulars post free on application.

WORKS BY JOHN CARROLL.

Just Out. Crown 8vo, cloth 1s. 6d.

PATTERN DRAWING AND DESIGN.

The application of Geometrical Drawing to the Construction of Ornament and the Planning of Patterns.

This book is intended to be both an introduction and a companion to the author's work on "Practical Plane and Solid Geometry."

FREEHAND DRAWING OF FOLIAGE, FLOWERS, and FRUIT. 1 6.
FREEHAND DRAWING OF ORNAMENT. 1/6.
PRACTICAL GEOMETRY FOR SCIENCE and ART STUDENTS. 1/6.
KEY TO CARROLL'S GEOMETRY. 1/6.

NEW WORKS BY F. F. LYDON.

NATURE LESSONS WITH THE BLACKBOARD.

Crown 4to. stiff boards, cloth back, 3s. net (postage 4d.) This book will meet the demand created by the modification of the Syllabus for Blackboard Drawing. Prospectus, with Specimen Plate, free on application.

FLORAL DESIGN IN COLOUR.

In Two Sets. Price 1s. 6d. net per Set (postage 2d.) This work consists of Two Packets of Cards printed in Colours, and gives a Progressive Course of Elementary Design.

School and College Furniture, and General Educational Apparatus.

Catalogue of School Books, Stationery, and General School Supplies post free on application.

BURNS & OATES, Ltd., Orchard St., London, W.

PHILIPS'

LARGE SCHOOLROOM MAPS.

The Publishers beg to direct the attention of Teachers and Managers of Schools, School Board Authorities, and others, to their Series of Schoolroom Maps—the largest and most practical Series of Wall Maps ever prepared for School use, and distinguished from all others by greater boldness, clearness and accuracy.

Size—68 *by* 54*in. Price, on Cloth, Rollers and Varnished,* 14*s.*

LIST OF THE SERIES:—

1 **The World in Hemispheres.**
2 **The World on Mercator's Projection.**
3 **British Empire throughout the World (New Edition).**
*4 **Europe.**
5 **British Isles.**
*6 **England.**
7 **Scotland.**
8 **Ireland.**
9 **Asia.**
10 **Palestine and Syria.**
11 **India.**
12 **Africa.**
13 **North America.**
14 **Dominion of Canada (6ft. 6in. by 4ft. 3in.)**
15 **United States.**
16 **South America.**
17 **Australia and New Zealand.**
18 **New South Wales.**
19 **New Zealand.**

* Coloured Outline Maps of these Countries may be obtained, uniform in size and price.

Semi-Upright Copy Books

Have been expressly Designed to produce

BOLD, CLEAR AND RAPID WRITING.

In 18 Books. Price **2d.** each,

PHILIPS'

London School Board Atlas of Comparative Geography.

Specially Prepared for the London School Board.

A REAL EDUCATIONAL ATLAS THAT CONVEYS ITS MAIN PURPOSE ON BROAD LINES INSTANTLY.

90 Maps and Plans, Printed in Colours, on 40 Plates, with Eight pages of Text.

Large 4to. (11 x 9 inches), Stiff Covers, Cloth Back.

Price 1/- net.

"This is a marvellous production. So good an Atlas at so small a price is specially creditable to its enterprising publishers. All Teachers should see it."—*Schoolmaster.*

DETAILED PROSPECTUS ON APPLICATION.

London: GEORGE PHILIP & SON, Ltd., 32, Fleet Street, E.C.

BUXTON AS A HEALTH RESORT.

By G. Lorimer, M.D.

In considering the value of Buxton as a health resort it is necessary to describe (*a*) the general hygienic features of the district, as well as (*b*) the thermal mineral springs, on account of which it is specially known.

(*a*) The General Hygienic Features of the District.

The salubrity and health-giving character of Buxton and its surrounding district are of exceptional value. Situated in a valley, at an elevation of 1,000 feet above the sea, and surrounded and sheltered by hills from 500 to 1,000 feet higher, it is midway between the German Ocean and the Atlantic, and blends the qualities of the air from both coasts. It is the highest tract of country in the same latitude, and its physical character consists of two great geological formations —of mountain limestone to the south and east, and of millstone grit to the west— giving a dry and upland expense of country; the soil of both formations, being porous, and thinly covering the rocks, is dry and absorbent.

There are no stagnant waters in its vicinity, nor are there misty exhalations from the soil. There is an entire absence of marshy and miasmatic emanations, and the air is therefore pure, rich in ozone, and distinguished for its aseptic, rarified, and exhilarating qualities.

Photo by

DEVONSHIRE HOSPITAL

Stannard, St. Ann's Road

Buxton,

DERBYSHIRE.

HIGHEST TOWN IN ENGLAND.
ON THE MOUNTAIN LIMESTONE.
1,000 FEET ABOVE SEA LEVEL.
CENTRE OF THE PICTURESQUE PEAK DISTRICT.
PURE AIR.
CHARMING SCENERY.

HOT MINERAL-WATER BATHS,

For GOUT, RHEUMATISM, SCIATICA, &c. . . . . .
Natural Temperature 82° Fahr.

FINEST PUBLIC GARDENS at any Health Resort in Europe, with Pavilion, Opera House, Concert Hall, Tennis, Bowls, &c.

FIRST-CLASS GOLF (2 LINKS).

For ILLUSTRATED GUIDE, with Tariffs of the leading Hotels, Hydropathics, Boarding and Lodging Houses, send postage stamp to

THE SECRETARY, "Guide Office,"
Town Hall, BUXTON, Derbyshire.

THE COCOA "PAR EXCELLENCE."

Fry's PURE CONCENTRATED

300 Gold Medals, &c.

Cocoa.

"It deserves all the praise it has received from the Leaders of the Profession."—Medical Magazine.

The prevailing winds are west and south-west. The average mean temperature is 48 degrees Fahrenheit. The average mean rainfall is 51·6 inches, greater than that in lower and less mountainous districts, yet the average mean relative humidity is only 81 per cent.

The death rate for the past five years is 12·2 per 1,000 of population. The death rate from zymotic disease for the past ten years is only 0·7, as compared with 1·87, the death rate for the whole County of Derby, and 2·0 the zymotic death rate for England and Wales in the same period.

The water supply is obtained from the moorland heights on the millstone grit formation; it has only one degree of hardness, and is free from all deleterious ingredients.

The drainage is effected by a complete system of sewers, and the sewage is removed to a mile from the town, where it is dealt with by approved methods for its utilisation and destruction.

The height of Buxton above the sea level renders the air both specifically lighter and colder than that in lower situations in the same latitude, but this alleged defect does not affect the salubrity of the district. It has been experimentally demonstrated that the chilling effects of cold, moist air, are much greater than of cold, dry air, and therefore the coldness of the air of Buxton is more than compensated for by its *dryness* and *tonic properties.*

Exception has sometimes been taken, from a health point of view, to the excessive rainfall in the Buxton district. Experience shows that the climate is not injuriously affected by it. On the contrary, not only is the relative humidity of the atmosphere not increased by it, but with a dry, rapidly-absorbent soil, free drainage, and rapid descent from the hills, a heavy rainfall under such conditions is not injurious, but from a sanitary point of

view positively beneficial. The wettest seasons have often been known to be the most healthy, both as regards death rate and amount of disease.

The climate of Buxton promotes nutrition, increases tissue change, aids elimination of metabolism, improves the quality of the blood, invigorates the functions of the nervous system, and is therefore well suited to improve disturbances of nutrition due to inert tissue change, to invigorate constitutions broken down by causes of exhaustion and depression, to improve sanguification, strengthen neurasthenia, and in regard to cases of gout and rheumatism the climate operates in the way of helping the effects of the baths, particularly in obviating what might be an excessive effect of their sedative quality.

The climate of Buxton has proved beneficial also in some chest diseases, such as asthma; and even cases of pulmonary phthisis improve in the highest altitudes of the limestone formation, and in a few instances complete and permanent recovery has been attained.

(*b*) Thermal Mineral Springs.

The thermal water issues from fissures in the limestone at the edge of the formation at a constant temperature of 82 degrees Fahrenheit. There are nine springs, and the amount discharged is calculated at 150 gallons per minute. The water is brilliant, tasteless, inodorous; the gaseous constituents are visible in the water in the form of minute bubbles, adhering to the glass when held to the light. It is feebly alkaline, and has a faint blue colour. It has been classed among the "indifferent thermal waters," which are poor in mineral ingredients, but the chief feature is the large amount of free nitrogen gas which it holds in solution. The most important analysis of the water was

made by Lord Playfair in 1852. The latest analysis has been made by Dr. Thresh, whose analysis agrees with that of Lord Playfair as to the quantity of nitrogen evolved at the spring, but differs from it as to the amount held in solution. The analysis is as follows:—

Saline Ingredients.	Grains per Gallon.
Bicarbonate of Calcium	14·10
,, Magnesium	6·02
,, Iron	0·03
,, Manganese	0·03
Sulphate of Barium	0·05
,, Calcium	0·26
,, Potassium	0·62
,, Sodium	0·84
Nitrate of Sodium	0·03
Chloride of Calcium	0·02
,, Sodium	3·10
,, Ammonium	trace
,, Magnesium	0·95
Silicic Acid	0·95
Organic Matter	0·02
Carbon Dioxide	0·20
Nitrogen	0·19
	27·32

Lithium, Strontium, Lead, and Phosphoric Acid—traces.

A series of analyses of the gases evolved gave—

	Cubic Inches per Gallon of Water.
Nitrogen	6·1
Carbon Dioxide	4·1
	10·2

which gave the percentage composition

Nitrogen	59·78
Carbon Dioxide	40·22
	100·00

More recently it has been found by Lord Rayleigh that the nitrogen of the Buxton water contains 2 per cent of argon, with traces of helium.

The springs of Gastein and Wildbad in many respects resemble Buxton, but are inferior to it in the amount of

free nitrogen which they contain. It has been calculated that the former contains 4 cubic inches of nitrogen and the latter 4·7 cubic inches, per gallon, so that the amount of free nitrogen in Buxton water exceeds the other springs by one-third.

THE BATHS.

There are two systems in use in separate buildings—

(*a*) *The "natural" baths* (so called because the thermal water is used as it rises from the spring), which are immersion baths provided with douching apparatus. There is a large swimming bath, measuring 30 feet long and 18 feet wide, as well as private baths, which measure 11 feet long and 5 feet wide. The sides are of white porcelain, and the steps and floor of white marble. The floor is

perforated with holes, through which the water enters from the spring beneath.

(*b*) *The "hot" baths*, in which the water is heated artificially, which is effected by mixing with the natural water a portion of it heated in a tank by means of a steam coil to about 200 degrees.

The "hot" baths are immersion baths also, and each bath contains about 250 gallons of water, in which the patient sits with the water up to the neck.

Here also are provided needle, shower, vapour, and massage baths, with all douching appliances—steam, spray, wave, undercurrent, and continuous.

The massage bath is a special mode of application of the thermal mineral water. This bath is a flat dish of copper, on which the patient may recline without immersion in the water, and the douche, ascending, descending, or horizontal may be applied to any part required, while a skilled masseur continues his manipulation on the affected parts.

Action and Uses of the Thermal Water.

When taken internally the water is rapidly absorbed, easy of digestion, seldom produces nausea or irritation, occasionally vertigo; it acts as a feeble stimulant, and is also alterative and diuretic, increasing the excretion of urea, uric acid and phosphates, while under its influence secretion is increased, and metabolic products eliminated.

The amount of water to be taken, the time, and the frequency vary according to the nature of the case and the conditions for which it is used.

When the water is used as a bath in health the first effect is a momentary shock, greater, however, than would result from water at 82 degrees.

The cutaneous vessels contract, and when the water

reaches the level of the chest the respiratory centre may become reflexly affected, and gasping respiration result. The contraction of the cutaneous vessels is followed by relaxation, producing a feeling of glow, and, as a consequence, increased muscular tone and diuresis, with improved appetite and increased tissue change. The removal of waste products and absorption of exudations are promoted, nervous and muscular irritability calmed, and the tone and function of the skin stimulated.

When, however, the bath has disagreed, protracted rigors, tremors, stiffness of the muscles, languor, heat, restlessness, insomnia, headache, and palpitation may follow, and pass into irregular pyrexia.

The length of time for remaining in the bath varies according to the character of the case and condition of the patient.

The natural bath is to be preferred, but if the circulation is feeble or irritable, re-action defective, or for other reasons, the hot bath is prescribed.

The baths must be used with caution in asthemic states of the system, when pyrexia is present, when re-action is deficient, or cardiac disease exists, when there is a tendency to cerebral hyperæmia; and if these conditions are marked their use may be contra-indicated altogether.

At the commencement of a course of baths and waters, it happens occasionally that previous symptoms are accentuated, and sometimes an arthritic attack evoked; but it is generally held that this preliminary aggravation precedes permanent amendment.

Therapeutic Uses of the Thermal Waters and Baths.

These can only be briefly adverted to.

1. Gout and all gouty affections have a first place, either

in its subacute or chronic forms, or its irregular and marked forms; next, all affections depending upon the uric acid diathesis, as gravel, gouty glycosuria, eczema, etc.

2. Rheumatism, either articular, consequent on acute rheumatism, or subacute and chronic rheumatism; in rheumatism of the muscles, fasciæ, and nerves, the baths and waters are justly held in high repute.

3. In sciatica, associated with a gouty or rheumatic diathesis, and in rheumatic or gouty affections of joints or muscles consequent on injury, the baths and waters are beneficially employed.

4. In the early stages of rheumatoid arthritis benefit may result from the use of the baths and douches. In the more confirmed stages of the disease the results are negative.

5. In toxic arthritic affections the effects of the baths are beneficial, but the curative results more protracted.

6. Some diseases of the nervous system, if associated with a gouty or rheumatic state, as chorea, neuritis, locomotor ataxy, hemiplegia, etc., are improved, but the results are not invariably attended with success.

It may be interesting, in conclusion, to refer to the Devonshire Hospital and Buxton Bath Charity, which is the great National Hospital for gout, rheumatism, and allied diseases, to which patients are admitted from all parts of the United Kingdom for treatment by the external and internal use of Buxton waters, and all other approved means. There are 300 beds. The field for observation in these special diseases is most extensive, while many of the cases are of a very aggravated character, and unique and unusual description. During the past forty years 85,710 patients have been treated; 77,836 were cured or improved, and 7,874 were discharged the same.

Photo. by THE NEW PUMP ROOM, BUXTON. *Mr. D. C. Latham.*

BUXTON,

DERBYSHIRE.

MARY QUEEN OF SCOTS,
1580.

PATRONIZED

BY

QUEEN VICTORIA,
1832.

Highest Town in England.
On the Mountain Limestone.
1,000 feet above Sea Level.
Centre of the Picturesque Peak District.
Pure Air. **Charming Scenery.**

HOT MINERAL-WATER BATHS,

For Gout, Rheumatism, Sciatica, &c.
Natural Temperature 82° Fahrenheit.

FINEST PUBLIC GARDENS AT ANY HEALTH RESORT IN EUROPE, WITH PAVILION, OPERA HOUSE, CONCERT HALL, TENNIS, BOWLS, &c. FIRST-CLASS GOLF (2 LINKS).

For ILLUSTRATED GUIDE, with Tariffs of the Leading Hotels, Hydropathics, Boarding and Lodging Houses, send postage stamp to

THE SECRETARY, "GUIDE OFFICE,"
TOWN HALL,
BUXTON, DERBYSHIRE.

DIXON'S PATENT "EUREKA" WELSH WRITING SLATES.

These superior Slates are made upon an entirely new principle, which supersedes the old-fashioned frame that was simply held together by wooden tenons and small pins.

In place of these, the new Slates are strongly fastened at their corners by four of the patent metallic tenons, which are secured by eight substantial rivets. The frames are thoroughly braced together and the slates firmly held.

The Patent Tenons are placed inside the frames which are externally smooth so that there is nothing to scratch the desks or hurt the hands.

Each Slate bears our Registered Trade Mark "Eureka."

Also Manufacturers of all kinds of Writing Slates, Wall and Tablet Slates, and all Slate Requisites for Laboratories, &c.

MUNICIPAL BUXTON.

By Wm. Hedley Grieves, M.S.I., F.I.S.E.

In sanitary science advancement has been the watchword in Buxton for many years. Thanks to the foresight of the Urban District Council and their predecessors, Buxton has done its share to help on the general march of progress. Few towns of the size of Buxton possess their own water, gas, and electricity works. Large sums of money have been expended on these undertakings, and an additional sum of £170,000 is to be spent on further improving the water supply. A substantial profit has been earned by the gas department, which goes to the relief of the rates.

Buxton possesses a fine Town Hall, built about 14 years ago. In addition to the usual Council Chamber, which overlooks the Terrace and commands an extensive view of the hills as far as Castleton, there is accommodation for Police and County Courts, Masonic Rooms, a Public Library, a Museum, and an Assembly Room. In the Council Chamber is a bust of the late Lord Frederick Cavendish, and a fine portrait of the late Duke of Devonshire, and in January last a tablet was unveiled to commemorate the service of Buxton men who volunteered for active service in the late South African War. It is interesting to know that the Buxtonians were in the first draft of Volunteers to leave England.

Photo. by *P. Latham.*

BUXTON TOWN HALL (FROM TERRACE).

Perhaps the most important municipal undertaking from a sanitary point of view is the question of sewage disposal. In this connection the Council possess an outfall works, where the sewage is treated by what is called the chemical precipitation process; but, in addition, bacterial filter beds are in course of construction about three-quarters of a mile below the present outfall works. The Council also possess a Cemetery, a Sanatorium, Slaughter Houses, Cattle Market buildings, and a four-cell destructor furnace for destroying house and other refuse.

The roads and streets, well laid out, are among the finest in the country, made from the local limestone. The footpaths are chiefly asphalt, which is also made from the limestone quarries.

In 1894 the Duke of Devonshire built and presented to the town the Pump Room, where the healing waters, which have been known and used for centuries, can be taken. It is calculated that over a million glasses of these warm waters are drunk every year.

In addition to the Gardens of the Buxton Gardens Company, there are the Serpentine Walks, the Sylvan Park, and the Recreation Ground, open to the public for all time.

The Council are discussing a scheme with the neighbouring Urban District Council of Fairfield with a view to incorporation.

Photo. by CHEE TOR. *Valentine.*

ESTABLISHED 1858.

GEO. M. HAMMER & CO.

LIMITED,

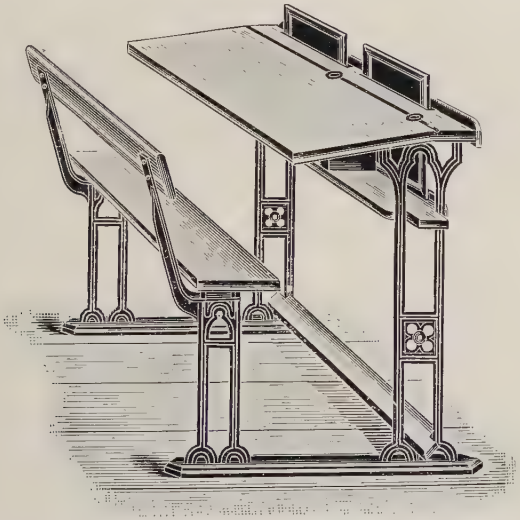
370, STRAND, LONDON, W.C.,

Manufacturers of every Description of

FURNITURE

FOR

SCHOOLS, INSTITUTES, ETC.



"CENTURY" DESK as recently supplied to the New Royal Masonic Schools, Bushey.

Proprietors of the "Premier" Patent Sliding and Folding Partitions for Dividing Schoolrooms.

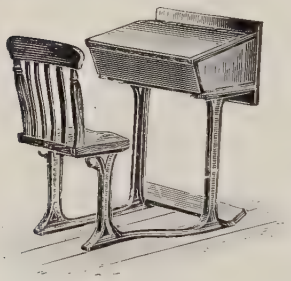
ESTIMATES GIVEN. ILLUSTRATED CATALOGUE POST FREE.

FISHER, SON & WEAVER,

Works: **WEST BROMWICH, Staffs.**

MANUFACTURERS OF

SCHOOL DESKS, FURNITURE and FITTINGS,



DESK No. 130.

FOR ***ELEMENTARY***
. . AND . .
TECHNICAL
SCHOOLS.

Over 5,000 Large Schools
supplied with our Desks.

THE OLDEST MAKERS IN THE TRADE

By far the Largest Desk Makers in the Midlands.

THE "KINGFISHER" DESKS,

WITH **WROUGHT STEEL** (Ornamental Designs).
FRED. H. FISHER'S **STANDARDS,**

To take the place of Cast-iron as made by other Firms.

INDESTRUCTIBLE AND UNBREAKABLE.

IMPROVED FOLDING PARTITIONS.

ASK FOR NEW CATALOGUE
Containing many New Inventions and Designs.

GEOLOGY OF THE DISTRICT.

By Elizabeth Dale.

Untold ages ago, the large areas in the British Islands, now occupied by rocks of the same age as those in the neighbourhood of Buxton, were covered by the waters of a clear and somewhat deep sea. The deepest parts of this sea were situated in Derbyshire, and it became shallow towards the north-west, in Lancashire. Above its surface arose as islands, the district of Wales, the Lake District, Charnwood Forest, and others. To the north and west of the sea stretched a great continent, rising into high mountains of granite and other rocks, and including what is now the Highlands of Scotland, united to Scandinavia, but also reaching outwards into the Atlantic Ocean. Between the high mountains and the sea came a flat fringe of country, formed by the sediments brought down by the rivers, while between the plains and the mountains lay a hilly district, in which were some active volcanoes. In the deeper parts of the sea, which were so far from the continental land that no sediments could be brought down into them, even by large rivers, to spoil the clearness of the water, lived many corals, brachiopoda, encrinites ("stone lilies," a stort or stalked starfish), and other animals with hard shells, which cannot live where

there is any mud. Gradually the continent encroached upon the sea, and the finest sediments (the muds) were brought further out to sea and deposited on the remains of the animals which had lived there. As the land crept outwards sands and, later, coarse gravels and pebbles were laid down in the sea, and gradually filled it up, until it became a series of swamps and estuaries, in which grew a most luxuriant flora. But the sea floor was all this time subsiding, though the subsidence was from time to time interrupted by periods of quiescence or of elevation, for in no other way is it possible to account for the accumulation of so many thousands of feet of deposits, some of which were formed on dry land and many in shallow water.

The rocks which these accumulations formed were, during the succeeding geological ages, raised up by earth movements into great folds, with lesser folds upon them, which in this district nearly all run from north to south. In some places the folding was carried so far that the rocks broke and became "faulted." The lowermost of the deposits, those which were laid down in the deepest and clearest parts of the sea, are calcareous beds, forming a hard, pure limestone, made up of the hard shells of the animals which lived in the water.

Above the limestone come beds of shale, which are the hardened muds which were laid down upon the calcareous deposits. Amongst the shales are some beds of sandstone, but all the limestone and shale beds are marine accumulations. The overlying rocks are the estuarine or land deposits, which were laid down when the continent had so encroached upon the sea as almost to have filled it up completely. The lowermost of these rocks are beds of coarse gritstone or sandstone, separated from one another by beds of shale. The uppermost rocks are chiefly sandstones and shales, with many beds of coal,

representing the flora of the ancient continent. The occurrence of this coal has given the name *Carboniferous* to this whole group of rocks, the subdivisions of which have been named as follows, the highest beds being placed at the top of the list:—

Upper Carboniferous: Coal measures and millstone grit.

Lower Carboniferous: Yoredale rocks, Carboniferous, or Mountain Limestone.

In the limestone are some beds of igneous rocks, chiefly lavas, poured out under the sea during the deposition of the rock in which they occur. They are known as toadstones. The Carboniferous Limestone is in many parts very fossiliferous, especially in its upper beds, some of which consist of little else than masses of shells. Some parts of the limestone are made up largely of corals, and others again of encrinites. Good localities for fossils are Park Hill, Chrome Hill, and High Wheeldon, near Earl Sterndale, Cracknowl Quarry, near Hassop, and the limestone near Castleton. On the road between Miller's Dale and Tideswell there are many corals, while encrinites are found on Grin Low and in numerous other places.

The Yoredale rocks and Millstone Grit contain very few fossils; indeed, only some badly-preserved traces of plants.

The Coal Measures at Goyt Head, in the river bed below the gate, contain plant remains, fish scales and a few mollusca.

The town of Buxton lies at the junction of the lower and upper Carboniferous rocks, chiefly on the Mountain Limestone and the Millstone Grit, in a valley about a thousand feet above the sea level, and close to the central watershed of England. Fairfield, and the country beyond Grin Low and Harpur Hill, are on the limestone. The valley above Buxton, in which Burbage lies, is occupied by Yoredale rocks, chiefly shales. The rocks of Corbar

Wood, and the hills beyond Burbage Edge and Axe Edge, are all formed of millstone grit, with interbedded shales.

The Carboniferous Limestone occurs as a dome-shaped mass of anticline, passing on all sides under the overlying Yoredale rocks. In some places the junction is faulted, and the Yoredale rocks are cut out, so that they only occupy limited areas. The Millstone Grit lies upon, but around and beyond, the central mass of limestone and Yoredale rocks, and the coal measures are locally represented only by isolated patches lying in the hollows of the folded Millstone Grit. The distribution of these rocks is most readily understood by examining a geological map. Ever since the Carboniferous rocks first rose above the level of the sea, agents of denudation, chiefly rain and rivers, have been wearing them away and lowering them, each kind of rock being acted upon in a different way, and giving rise to a different and well-marked type of scenery.

The sandstones and grits, with their intermediate beds of shale, which make up the Coal Measures and Millstone Grit, wear away into large step-like hills, with one side steep and the other gently sloping. The steep side is known as an *escarpment*, and the other, because it coincides with the "dip" or slope of the beds, as the *dip slope*. They arise by the cutting back of the sandy beds through the action of springs and streams running over the marshy shale beds, which separate the sandy beds from one another. This structure is excellently shown on the hill behind Corbar Wood, as seen from Grin Low on the one side, or Chapel-en-le-Frith on the other. The hill consists of five beds of grit-stone, separated from one another by shales, and the edges of these grit beds stand out at either end as well-marked shoulders, known locally as "edges"—

e.g., Axe Edge, Burbage Edge, Black Edge, Brown Edge. In the valleys at the foot of each is, or has been, the stream which cut back the grit and made the escarpment. These streams run over the intermediate shales. Near to Buxton the Yoredale rocks are chiefly shales, which, being softer than either the limestone or the Millstone Grit, wear away more quickly, and so lie in the valleys, Near Castleton, however, they have been raised up by earth movements to form the hill of Mam Tor, which owes its half-dome shaped form to a landslip. The hill may be seen from Solomon's Temple. The Millstone Grit and Yoredale rocks in course of time were cut down so far that the underlying limestone was exposed, and, in its turn, began to be subjected to denudation. While the sandy and shaley rocks, which we have been considering, are worn away chiefly by the *mechanical* action of rain and rivers, these same agents exert on limestone a destroying influence which is mostly *chemical*.

Rain absorbs from the air and from the roots of plants various acids, by means of which it dissolves the limestone on which it falls. The solvent action is exerted chiefly along the joints separating the cubical blocks, into which the limestone became separated as it dried and contracted. These joints thus become widened, so that the rain water sinks into the ground, and there forms the underground streams and caves so characteristic of limestone districts. The limestone is also at the same time worn away from the surface of the ground, so that the roofs of the underground passages are dissolved, and the caves become deep, narrow valleys or cañons, like that of the Wye between Buxton and Miller's Dale, and the ravine of Lover's Leap.

Sooner or later the underground water in the limestone caves comes to the surface again at a lower level. For example, the water in Poole's Cavern comes from Axe

Edge as a little stream which disappears into the ground through the "Plunge Hole" on the south of Grin Low. It then runs through the hill, where it may be seen in Poole's Cavern, from the mouth of which it formerly issued. It has now made for itself a fresh channel at a lower level, and comes out of the ground to form part of the River Wye at Wye Head, between Buxton and Burbage. Often water goes into the ground through depressions known as *water swallows* or *swallow holes*, such as may be seen in great numbers between Axe Edge and Grin Low, and on the high ground above Dowel Dale, near Earl Sterndale. The water issuing from the Peak Cavern is collected from the limestone area between Buxton, Dove Holes, and Castleton, where it enters the ground by numerous swallows. Two of the largest of these are known as the Eldon Hole and the Giant's Hole. The scenery of the various members of the carboniferous limestone rocks is also modified by the flora peculiar to each.

The limestone forms rounded, undulating hills, clothed with short grass, amongst which grow numerous small flowers, notably saxifrages, stone crops, thyme, and bedstraws. But there are few trees, except in the deep valleys which intersect the country and vary the monotony of bare green field and grey stone walls. The Yoredale shales and the intermediate shaley beds between the gritstone form low-lying marshy ground, covered with rushes, rank grass, and other bog plants. The Millstone Grit, with its dip slopes and escarpments, forms the rolling moors of Derbyshire, and is covered with heather, heath, bracken, bilberry, crakeberry, cloudberry, cluster berry, and other moorland plants. Where it has been reclaimed it forms pasture land, and in places it has been planted with trees.

It is impossible in these few pages to give more than a brief sketch of the geology of this interesting district, but the writer has elsewhere given a more detailed account of it.* The subject is also treated fully, but more technically, in the memoirs of the Geological Survey for the district, viz., "The Geology of the Carboniferous Limestone, Yoredale Rocks, and Millstone Grit of North Derbyshire," and "The Geology of the country round Stockport, Macclesfield, Congleton, and Leek." The Ordnance Map of the district, which may be obtained geologically coloured, is sheet 81.

* "The Geology and Scenery of the Peak of Derbyshire." Published by C. F. Wardley, Buxton, 1900.

Photo. by ASHWOOD DALE *Valentine.*

CRISPINS, BRISTOL,

Heating and Ventilating Engineers.

VICTORIA PARK SCHOOL.

The above, with the major portion of Bristol Schools and Colleges, have been heated and ventilated by

JAMES CRISPIN (F.R.H.S.) & SONS.

Offices: **NELSON STREET.**

Works: **ST. PHILIP'S, BRISTOL.**

PUBLICATIONS OF

BEMROSE & SONS Ltd.

THE BEMROSE-BINNS' REGISTERS, &c. Printed in blue ink on superior paper, stitched and bound in the best style.

ACCURATE, CONVENIENTLY ARRANGED, UP-TO-DATE.

Admission Register.
Attendance Registers.
Registers of Summaries.
New Infants' School Summary
Fees Registers.
Evening School Registers.
Log Books, Minute Books, Treasurer's Cash Books.

HELLER'S ANNOTATED EDITION OF THE CODE, 1903-4. 43rd Edition, Revised and Edited by R. HOLLAND, National Society's Office. *Now in preparation*

INDISPENSABLE FOR MANAGERS AND TEACHERS.

EDUCATIONAL WORKS.

Reading Books, Arithmetic Books, Grammar Books.
Copy Books, Writing Charts, Table Cards, Drawing Books and Charts, Books on Domestic Economy.
Memory Work for All Standards (1d.). 575th thousand.
Memory Work for Junior Classes (1d.).
Technical Series. Religious Publications.
Works on Archæology, Topography, Science, &c.

Proposals for new publications should be addressed to 4, Snow Hill, London.

Specimens of Bemrose's Publications will be on view at the N.U.T. Conference at Buxton in Easter-week, 1903. Stall No. 33b.

Full Lists and Specimen Pages will be sent on application—

BEMROSE & SONS LTD.,

4, SNOW HILL, LONDON, E.C.; and DERBY.

NOTES ON THE BOTANY OF THE DISTRICT.

By Professor Barker.

Visitors to Buxton fond of collecting plants may easily spend a month or more without exhausting or even fully examining the more interesting localities, and the chief aim of the present paper is to give a list of some of these, from which a selection can be made to suit time and convenience.

Geologically the town is favourably situated, being on the boundary between the millstone grit and mountain limestone, so that there may be found within easy reach, in addition to plants which seem indifferent to the nature of the soil, not a few lime lovers on the one side and lime haters on the other. This boundary follows in one direction nearly the line of the London and North-Western Railway to Dove Holes, and in the other runs westward past Burbage, where it turns southward, passing to the east of Axe Edge. On the north and west of this boundary lies the gritstone, including all the higher moors, such as Combs Moss and Axe Edge, while, to the east and south is the limestone embracing the valleys of the Wye and Dove, together with many lateral valleys.

Although the moors attain a considerable elevation—1,600 to 1,800 feet—few alpine species will reward the explorer. The surface of the gritstone is hard and sterile,

and there is a scarcity of moist ledges and fissures such as, in other districts, often nourish a rich flora. The interesting plants are moor- and bog-loving species, and of these there is a fair, if not a large, number.

In the limestone region, on the other hand, different conditions prevail. Its characteristic deep and narrow valleys appear to provide the shelter and moisture favourable to the growth of an abundant and varied flora, and here the collector may spend many a pleasant hour in adding to his botanical treasures.

The approaching publication of a "Flora of Derbyshire" (by Rev. W. R. Linton) renders unnecessary a detailed list of the species recorded for the district, and probably it is more useful to a collector to tell him where to go than what to look for. It is best to gather specimens of any plant that at the moment seems interesting for further and leisurely examination.

LIST OF LOCALITIES WORTH VISITING.

A.—GRITSTONE.

1. Lightwood and adjacent moors, including Combs Moss. A walk of about a mile from Buxton leads to the Reservoirs, near which some not very common mosses may be found, while on the moors may be gathered representatives of the moorland flora.

2. Axe Edge and neighbouring mountain slopes. Public conveyances in the season to the "Cat and Fiddle." The flora is not very varied, but includes some interesting moorland plants.

3. Errwood and the Valley of the Goyt. Many will be attracted hither for other than botanical reasons. The approach to Errwood House is through a beautiful ravine, whose sides are covered with rhododendrons, and

when these are in flower, about June, the sight is one not to be missed. The course of the Goyt above Whaley Bridge is the prettiest gritstone valley near Buxton. If a visit be made viâ Goyt's Lane, the botanically interesting Wild-Moor Clough lies below on the left hand. At the head of the valley is Goyt's Moss. The botanical attractions of the places here named are such that they well deserve a visit.

4. Combs Reservoir and neighbourhood. Train to Chapel-en-le-Frith (Midland or London and North-Western Railway), whence a walk of over a mile towards Whaley Bridge. Around the reservoir and in the neighbourhood are some good plants, and a still greater number of mosses, including several usually regarded as rare.

5. Walk by Manchester Road, diverging to the right beyond Cold Springs, along the old road past Whitehall and Wythen Lache, turning to the right at the further end of the wood above Lanehead Farm, and skirting the north face of Ladder Hill to Combs Village, and the Chapel Station of the London and North-Western Railway, or descending on the left to Combs Reservoir. Along and near the route are a few flowering plants, and many mosses of interest.

B.—LIMESTONE.

6. Ashwood Dale—*i.e.*, the Valley of the Wye for three miles below Buxton. One excursion may be devoted to the neighbourhood of the Lovers' Leap and Duke's Drive, and another to the rest of the dale. The scenery will be a sufficient reward even if the many botanical treasures should be missed.

7. The Valley of the Wye below Ashwood Dale, including Cheedale, Miller's Dale, and Monsal Dale. A path diverges from the Bakewell Road, three miles below

Buxton, and traverses Cheedale, one of the finest of the limestone ravines to Miller's Dale Station, and for the rest a start may be made from Miller's Dale or Monsal Dale Station. This route is rich in plants and mosses, and several days may be devoted to it.

8. Dove Dale.—Train to Alsop-en-le-Dale, road to Mill Dale, then footpath through Dove Dale, returning by train from Thorpe Cloud, or *vice versâ*. This valley is sure to be visited on account of its scenery, while at the same time it is one of the richest limestone valleys in flowering plants and mosses.

It would occupy too much space to enumerate all the interesting localities which can be easily reached from Buxton, but it may be useful to botanists making some stay there to name a few, together with the stations from which they may be reached: Great Rock's Dale (Peak Forest), Deep Dale (Hindlow), Monk's Dale (Miller's Dale), Cressbrook Ravine (Monsal Dale), Taddington Dale (Miller's Dale or Monsal Dale), Lathkil Dale (Hurdlow or Bakewell). The Midland route to Sheffield passes Edale, Hope (for Castleton and Bradwell), Bamford, Hathersage, and Grindleford, all of which may be made starting points for interesting excursions. Castleton and Bradwell are on the limestone, and the others on the gritstone.

Besides these longer and more distant excursions, which may be easily made from Buxton, all the short walks near the town should be interesting to the botanist, for whom, indeed, the district ought to prove a happy hunting ground.

MACMILLAN & Co. Ld.

All Teachers at the N.U.T. Conference should see the following NEW PUBLICATIONS in the Exhibition:

Macmillan's Spelling for Promotion. By R. F. Macdonald. Junior, Parts I. and II. Intermediate, Parts I. and II. Senior, Parts I. and II.

Macmillan's Story Readers. By Evelyn Sharp. Fully Illustrated, Introduction. Book I., Book II.

The "Globe" Poetry Reader for Advanced Classes. 192 pp. 1s. 4d.

Murché's "Globe" Geography Readers. By Vincent T. Murché. With Coloured and other Illustrations. Introductory. Junior.

Murché's Rural Readers (Nature Study). With beautifully Coloured and Original Illustrations. Junior—Intermediate—Senior.

Buchanan's Country Reader. I and II.

Lessons in Country Life. By R. R. C. Gregory and H. B. M. Buchanan.

Macmillan's New History Readers. On the Concentric Plan. Fully Illustrated with Maps and Pictures. Primary—Junior—Intermediate and Senior.

Macmillan's New "Continuous" Readers.

Alice in Wonderland. Through the Looking Glass. The Cuckoo Clock.

Macmillan's Brush-Work Drawing Cards. By F. C. Proctor. A. Animals; B. Birds, &c.

Macmillan's Special Editions of Books set for **P.T.'s Scholarships and Certificate Examinations.**

Macmillan's Half-Crown Prize Library—now numbering over Eighty volumes.

REPRESENTATIVES—

Mr. A. E. PITT, Mr. E. W. WESTMACOTT, and Mr. H. C. CASTLE.

MACMILLAN & Co. Ltd., St. Martin's St., London, W.C.

The BRIGHTEST and BEST MAGAZINE

for Sunday and General Reading.

The Treasury.

Edited by ANTHONY DEANE.

Contents for April:

New Portrait of Lord Hugh Cecil, M.P. With an appreciation.

The Doctrine of the Death of Christ. By the Rev. ARTHUR W. ROBINSON, B.D.

The Samaritan Passover. With Sketches. By J. EADIE REID.

The Legend of the Tree of Life. By AGNES A. HILTON. (Illustrated).

Bird's Nest Photography for Amateurs. (Illustrated).

A Street of Palaces. (Illustrated). By ARTHUR REYNOLDS, M.A.

The Parish Church Choir. By JAMES THOMSON, F.R.A.M.

The Honourable Molly. By KATHARINE TYNAN.

An Episcopal Ghost Story. (Illustrated).

A Day of My Life. By a SISTER OF MERCY.

Our Parish Churches: What they Are, and what they Teach. (Illustrated). By E. HERMITAGE DAY.

An Allegory for Children.

Short Stories, Editor's Notes, Photographic Notes, Competitions, etc.

OF ALL BOOKSELLERS 6D. NET.

London: G. J. PALMER & SONS, Portugal Street, Strand, W.C.

THE DAWN OF CIVILIZATION IN THE PEAK.

By W. J. Andrew, F.S.A.

PALÆOLITHIC MAN.

Man, in the earlier stages of his development, would be content with the few implements which he could devise with wood and selected stones in their natural state. Of these, however, he has left us no trace, for his wooden clubs and spears have long since perished, and the stones he used are indistinguishable from their kind. But in course of time he would discover that the harder stones were the more serviceable, and that, if chipped away to a point, he had obtained a cutting instrument suitable for his general purposes. He clothed himself in the skins of the animals he hunted, and found what shelter he could in the caves and crevices of the earth and dens in the woods, when England was attached to the Continent and overrun by the mammoth, the woolly rhinoceros, the cave bear, and many other animals long extinct. He learnt to fashion small implements of bone, and even attained sufficient art to scratch representations of the animals he knew on pieces of bone and ivory. Such was Palæolithic man. A man of a low, protruding forehead, savage by nature, and even at war with his own kind.

That he also inhabited that portion of the country which we now know as Derbyshire we are assured, for his relics have been discovered by Professor Boyd-Dawkins, the Rev. J. M. Mello, and others, and that he perished or

Photo. by ARBOR LOW. *Steward & Co.*

disappeared from this part of the world, together with most of the animals with which he was contemporary, in those great geological changes which separated our country from the mainland, seems but a natural deduction.

NEOLITHIC MAN.

England then became an island, and probably remained uninhabited by man for thousands of years, until the inhabitants of the Continent, a race of men of a new order and very different physique, had acquired some primitive means of navigation. The race who came still, in the main, used wood and stone for their weapons, but these were fashioned, and as time went on polished and finished in a manner the opposite in nearly every respect to that of their predecessors. They had learned the advantages of tribal co-operation, of agriculture, of flocks and herds, and of structures for defence against their enemies. Even the rudiments of a superstitious religion appeared in their worship of the sun and in the care with which they buried their dead, and provided for a future state by the lavish deposit of implements of great value to themselves, which almost invariably accompany the remains.

The Peak, owing probably to its mountainous character, is rich in the relics of the Neolithic man, and in the immediate vicinity of Buxton tumuli of this period are not infrequent; but owing to the custom of the later Bronze-age man of often selecting the neolithic tumuli for his interments it is impossible within the limits of this paper to discriminate between the two, and therefore they will be classed under the latter heading. But near Parsley Hey Station, nine miles south-east from Buxton, is one of the most interesting monuments remaining in Europe of the religion of the Neolithic race, namely, the Temple of Arbor Low. It stands 1,200 feet above the sea level,

and is composed of a circular, or, rather, pear-shaped plateau, from 50 to 55 yards in diameter, surrounded by a deep fosse, the débris of which has been thrown up on the *outside* to form a high vallum. Around the edge of the plateau and in the centre was arranged a series of upright slabs of surface limestone, many of which exceed nine or ten feet in length, but all have now fallen, or, as Mr. Hubbersty suggests, have, perhaps, during the Roman or early Christian period been purposely thrown to the ground. Recent excavations by the British Association, under the care of Mr. St. George Gray, have discovered some of the stone implements with which the artificers worked; and as similar relics have lately been found at Stonehenge, we may safely infer that these two great monuments, so similar in their designs, were constructed by the same race of men, and for the same purpose. This purpose, in the instance of Stonehenge, has been satisfactorily demonstrated by Sir Norman Lockyer and Mr. F. C. Penrose to be that of a temple dedicated to the worship of the sun, and its date of origin approximately B.C. 1680.*

Again, within half a mile of Doveholes Station, three miles north east of Buxton, is a precisely similar monument to Arbor Low, now known as the Bull Ring, but from which probably at no remote period the great stones have unfortunately been removed. Again, close to the Buxton Cemetery there are indications, now nearly obliterated by the plough, of what may possibly be the remains of a similar design, and, if so, it has geometrical additions which are worthy of the attention of Sir Norman Lockyer.

The Neolithic tribes dwelt in the valleys, but constructed camps of refuge in naturally strong positions, usually on

* See the current volume of the *Archæologia*.

the hill tops, for the resort and safety of themselves and their herds during tribal warfare. It is only with the pick and shovel that these can with certainty be distinguished from the forts of later times, but the general character of their design is recognisable in the attempt to adapt the maximum of natural to the minimum of artificial means of defence. Such is probably Cooms Moss, the great camp standing above the London and North-Western Station at Chapel-en-le-Frith, where a promontory of the hill, protected on all sides, save one, by precipices of rocks, has been defended on that side by a double fosse and vallum, so that the whole forms a fortified enclosure of several acres of land.

THE BRONZE AGE.

About the period of the erection of Stonehenge, England was invaded by a race of men whose physique and customs were again of a new order. They came with a knowledge of the use of metals, and had already perfected the art of fusing two metals together, copper and tin, to compose a hard bronze, from which they constructed weapons of no mean quality. Their habits were warlike and aggressive, and in course of time they drove the Neolithic men before them, and spread over the whole of the county. Their remains are prolific, especially in the Peak district. Scarcely is there a hill without the low mound of their tumulus or low (Anglo-Saxon *hlæw*, a grave mound) showing upon it, and around Buxton we have only to look at the Ordnance Maps to find numerous examples on all sides. To the north we have Cow Low and Lady Low; to the east Fairfield Low, Sladon Low, and Chelmerton Low; to the south Great Low and Nether Low; and to the west Grin Low, but these are but a few of the many. Perhaps the most interesting are Minning Low, on the

Ashbourne Road, and the Five Wells Tumulus, Miller's Dale, which is a chambered barrow, and was recently explored by Mr. Micah Salt, of Buxton. It should, however, be remembered that some of these barrows are of prior Neolithic origin, and some used in the later Iron Age. This is ascertainable from the character of the burial, whether crouched, cremated, or extended, and by the articles deposited with the remains, particulars of which it is impossible to attempt within the limits of our pages.

The camps of the Bronze-age man were similarly situated and used to those of his predecessor, but he was more lavish in his labour, and therefore more independent of a naturally strong position. The great camp of Mam Tor, between Edale and Castleton, is an example usually credited to him, and its selection gives us a good example of the care with which he usually studied his defences, for its only entrance is brought up between two natural precipices* in the one position in which nature has assisted his attempt at impregnability.

THE IRON AGE.

As the use of metals developed the time came when the bronze gave way before the easier-worked and more useful iron weapons and implements. In England, however, this change occurred so shortly before the advent of the Romans that it is only with great care and precision that the pre-Roman iron implements can be distinguished from their successors, forged under Roman influences. It was, however, at this period that the art of coinage was introduced, and the first money coined in England was of gold and silver. This was imitated from coins of Philip II.

* These precipices are usually termed landslips and credited with later origin than the earthworks. But this fact alone throws doubt upon the theory, and there seems no reason to prefer a comparatively recent catastrophic origin to the gradual evolution caused by atmospheric disintegration.

of Macedon (d. B.C. 336), but during the 200 years during which the model was copied and recopied in Europe, before the art reached this country, the money and its prototype are only recognisable by careful comparison. But the inaccessibility of the Peak district undoubtedly retarded the advance of civilization, and it is very doubtful if any money was even current here prior to Roman times.

THE ROMAN OCCUPATION.

The Peak was then on the confines of the territories of the Coritani and the Brigantes, which were probably separated by the River Noe, and, perhaps, from earlier times the camp at Mam Tor had been used as a frontier fortress. The natural strength of the district aided its defence, and it would seem that it was not until the dissensions under the British Queen Cartimandua of the Brigantes, A.D. 69*, enabled the invaders to take possession of the mountainous district between Derby and York, that the Peak was finally subdued. Then it was that the Romans discovered the mineral waters of Buxton, and, as at Bath and Ilkley, selected the site as a centre of occupation. This is proved by the network of their great roads which concentrate at Buxton. The remains of the Roman bath itself were discovered when the Crescent was built a little over a century ago, and it was opposite the site of the present Pump Room. Various traces of Roman villas and other remains have been from time to time discovered within the town.

The principal Roman roads leading out of Buxton are as follows:—

1. The King's Street,* a road following the line of the

* In 1893 a number of her coins were discovered, concealed in a hollow bone, at Honley, near Holmfirth.—*Numismatic Chronicle*, 1897, p. 29.

† So it is called in the description of the boundaries of "the common rights of pasture at Fairfield in our Forest of the Peak" in a charter of Henry IV.

present road to Ashbourne as far as Arbor Low, though in a straighter course, and thence by Aldwark to Little Chester, the Roman station one mile north of Derby. There is evidently a missing Roman station half-way between Buxton and Little Chester, for the invariable custom was to place one every twelve or fifteen miles, the usual length of a day's march. This road can be very clearly traced as far as Arbor Low, and it is curious that, as at the Bull Ring, Stonehenge, Avebury, and other similar temples, it passes within a comparatively few yards of the monument, thus suggesting that the latter was still venerated by the Britons, and attracted the invaders in their military advance with a view to bring it under their subjection.

2. The Bathom Gate, which, passing through Fairfield, presently turns to the north-west in a straight line for the Roman camp at Brough.* This camp is on the River Noe, a mile to the south-east of Hope Station, and still discloses the mounds of its walls, gates, and Prætorium, whilst in the village may be seen numerous worked stones which have been removed from the site. Thence the road branches north-east, and is known as the Doctor's Gate, to Melandra, another Derbyshire camp near Dinting, and on to Manchester; the other branch following the Cut Gate towards York.

3. Where the Bathom Gate turns to the north-east beyond Fairfield, the original line of direction is continued by a road leading north. This passes the Bull Ring, as previously described, and leads through Lydgate, Whaley Bridge, and High Lane, to the Roman stations at Stockport and Manchester.

---

* Col. Leslie has given the Derbyshire Archæological Society permission to excavate this camp, and the work will probably be commenced during the coming summer.

4. A road, difficult to trace at its commencement, taking the direction of Goyt's Bridge and thence branching in the one case through Bollington and Cheadle, perhaps to Warrington, and in the other as an alternative route to No. 3, to High Lane and Stockport.

5. A road past the Cat and Fiddle to the Roman camp or outpost at Toot Hill, above Forest Chapel. This is a remarkably well-defined specimen of a small Roman fort, and, except that as at Melandra, its walls are earthen ramparts, it forcibly reminds one of the "mile castles," on "The Wall" in Northumbria.

In addition to the above, there is believed to be a main road following the line of the present highway to Leek, and there are also numerous branch or alternate Roman ways of minor importance. A fine example of a Roman milestone was found at Silverlands, close to Buxton, and is now lent by the Derbyshire Archæological Society to the Public Museum at Derby.

THE ROMANO-BRITISH PERIOD.

After the exodus of the Romans in the early years of the fifth century the Peak would appear to have been overrun by the Picts, and this may account for the remarkable discoveries of Romano-British remains abounding in the caves of Deepdale, Pool's Hole, and Longcliffe, where skeletons have been discovered bearing suspicious signs of strife and massacre. It is recorded that the British then fled to the caves and secret places.

THE SAXON AND DANISH RULE.

The Peak knew little of the Saxon occupation prior to the invasion of the Danes. Then, however, it assumed an importance in our history as the natural frontier dividing the Danish kingdom of Northumbria from Saxon Mercia. It was, in fact, the debatable territory and more

than once the scene of conflict, for in the year 827 King Egbert fought his way to Dore, and there compelled the Northmen to swear allegiance. In 917 Ethelfleda, King Alfred's sister, wrested Derby from the Danes, but lost four of her thanes within the gates; and in 924 Edward the Elder advanced against the Danes, through Nottingham, and, as the "A.S. Chronicle" tells us, "went thence into Peakland to Bakewell, and commanded a burh (a defensive enclosure) to be built nigh thereunto and manned it." Mr. I. C. Gould has suggested that this was on the Castle Hill, close to Bakewell Station, which was, however, later the site of the castle of the Norman De Gernons. Perhaps the Christian Saxon cross at Bakewell was then erected, for its design represents a building, or tower, with a tiled roof, probably intended for a Church (a fact which seems to have hitherto escaped attention), exactly as upon certain ecclesiastical coins of the same kind. The camps at Hathersage and Youlgreave are presumably relics of the Danish defence of the Peak.

It was during the reign of Athelstan that a mint was established at Derby, and, as the first occasion when any money was coined within the county, this was an evidence of the advance of civilization. From that time the history of the Peak falls into and forms part of the general history of England.

The visitor to Buxton, if he is so fortunate as to obtain a glance at the private collections of Mr. Micah Salt, will be able to study a remarkable series of the Neolithic, Bronze, Iron, Roman, and Romano-British relics which that indefatigable explorer has gathered together from the caves and tumuli in the immediate vicinity of Buxton. It is also worth his while to inspect the results of excavations exhibited at Poole's Cavern, and in the Public Museum at Buxton.

Eyre & Spottiswoode.

LETTER FROM THE RT. HON. A. J. BALFOUR, M.P., ON THE CRITICISMS OF AN OPPONENT OF THE EDUCATION BILL, 1902. 2d.

EDUCATION ACT, 1902. 3d.; by post, 4d.

SPECIAL REPORTS ON EDUCATIONAL SUBJECTS. Vol I.—Under Revision. Vol. II.—Physical Education. Heuristic Method of Teaching. University Education in France, 6s. 2d. Vol. III.—Education in Switzerland, Prussia, Baden, and Sweden, 3s. 3d. Vol. IV. (Canada, Newfoundland, West Indies), 4s. 8d. Vol. V.—(Cape Colony, Natal, Commonwealth of Australia, New Zealand, Ceylon, Malta), 4s. Vol. VI.—Preparatory Schools for Boys: Their place in English Secondary Education. Price by post, 2s. 7½d. Vol. VII.—Rural Education in France, 1s. 4d. Vol. VIII.—Education in Scandinavia, Switzerland, Holland, Hungary, &c., 3s 2d. Supplement to Vol VIII.—Education in the Netherlands, 5d. Vol. IX.—Education in Germany, 2s. 7d. Vol. X., Part I.—Education in the United States, 2s. 3d. Vol. XI., Part II.—Do., 2s 6d. A detailed List on Application. Issued under the direction of MICHAEL E. SADLER.

PARIS EXHIBITION, 1900. Education in England, Wales, Scotland, and Ireland. Being a Descriptive Handbook accompanying the British Section. By post, 1s. 2d.

SCIENCE EXAMINATION PAPERS, 1902: Including the Papers Set at the Evening Examinations in April and May, and at the Day Examinations in June and July. 6d.

SOLAR PHYSICS COMMITTEE. The Sun's Spotted Area, 1832-1900. A Statement of the Mean Daily Area in each Synodic Rotation of the Sun, based upon data collected at the Solar Physics Observatory, South Kensington. 1s. 6d.

PUBLIC GENERAL ACTS (Cheap Edition). Published by Authority. Red cloth, price 3s. by post 3s. 4d. This volume contains all the Public Acts passed during the Session, with Index to same; also Tables showing the effect of the Legislation, together with complete and Classified List of the titles of all the Local and Private Acts passed during the Session.

DEPOSIT ACCOUNTS.

To meet the convenience of Customers, and to prevent any delay in supply, we accept deposits of large or small sums—varying according to the probable extent of orders—we undertake to despatch on day of issue copies of all Bills or Papers or Blue Books on any particular subject which the customer may define.

The system has been much appreciated by a large number of gentlemen interested in the passage of Bills through both Houses.

LONDON: EAST HARDING STREET, E.C.

Delegates are invited to inspect the undermentioned publications at the Exhibit of

THOMAS NELSON & SONS.

LITERARY READERS.

The Royal Prince Readers.
The Royal Princess Readers.
Nelson's Literature Readers.

GEOGRAPHICAL READERS.

The World and its People.
The Osborne Geography Readers.

HISTORICAL READERS.

The St. Andrew History Readers (Concentric).
The St. George History Readers.
The Windsor History Readers.

INFANT READERS.

Picture Readers for Infant Classes.
Up to London to see the King.

ROYAL WALL ATLASES.
PICTURES OF THE EMPIRE.
DIAGRAMS FOR OBJECT LESSONS, &c.
NELSON'S NEW DRAWING COURSE.
TEXT BOOKS for Students and Teachers.
EDUCATIONAL MAGAZINES.

Full particulars of the above Publications, &c., can be had of Messrs. Nelson's Representatives at the Exhibit, or on receipt of Post Card to

35, PATERNOSTER ROW, LONDON, E.C.

CHATSWORTH.

By Albert E. Wragg.

Our island may justly lay claim to superiority over most countries in the world with regard to the beauty and magnificence of its country seats, presenting as they do such a wonderful variety of architectural style and ornamentation. Of all the "stately homes of England" perhaps not one can vie with Chatsworth in appearance, situation, and in the vast store of art treasures of which it can proudly boast.

Chatsworth has been termed the "Gem" and "Palace" of the Peak, and well indeed does it deserve the titles. Old Chatsworth was regarded as one of the "seven wonders of the Peak," but the Chatsworth of that day would sink into significance if compared with the Chatsworth of the present.

It stands on a gently rising ground on the left bank of the River Derwent, with the steep slopes of the Stand Wood serving as a background, and sheltering it from the east wind. As Cotton, the poet, says—

> "This palace with wild prospects girded round,
> Stands in the middle of a falling ground,
> At a black mountain's foot, whose craggy brow
> Secures from eastern tempests all below."

From the opposite slopes many magnificent views of the house can be obtained. The park covers an area of

Photo. by

CHATSWORTH.

Valentine

about 1,300 acres, and is about ten miles in circumference, embracing a great variety of scenery. On the hill behind is seen the old Hunting Tower, which is supposed to have been used by the ladies of the house to watch the chase. It is customary to keep a flag flying here when the Duke is at home. Near it are several picturesque artificial lakes, surrounded by woods. The largest—the Emperor Lake feeds the large fountain in the gardens, and also provides power for producing the electric light.

The old park contains a number of fine, old, decayed oaks, stunted by age, but many still showing signs of vitality; probably all that remains of the Chatsworth of the Chetels and Peverils, and doubtless once forming part of an ancient forest which extended along the sheltered parts of the Derwent valley.

The bridge over the Derwent is an elegant structure. It was built from a design by Michael Angelo, and the ornamental marble figures are by Cibber.

The name Chatsworth is derived from Chetel the Saxon, who owned it, according to the Doomsday Book, previous to the conquest. Chetel's-worthe meant the Court of Chetel. At the time of the Norman survey it came into the possession of the Crown, and was granted by the Conqueror to William Peveril, his illegitimate son. It next came into the hands of the Leech family. In the reign of Edward III., one John Leech was medical attendant to the King. Several of the Leech family distinguished themselves in the Hundred Years' War. About the middle of the sixteenth century Francis Leech, the last of his race, sold Chatsworth to the family of Agard, who in turn sold it to Sir William Cavendish, in the reign of Queen Elizabeth.

The family of Cavendish trace their descent from the De Gernons. Their ancestor, Robert de Gernon, came

over with the Conqueror, and fought at the battle of Hastings. Sir William pulled down the old home of the Agards, and began to rebuild it, but died in 1556, leaving it unfinished. The work was, however, completed by his widow, the celebrated Bess of Hardwick, who afterwards married the Earl of Shrewsbury.

"This extraordinary lady," says Leyland, "something of a vixen, we may believe, who was married to four husbands, and discomfited, at any rate, the last of them, was the builder also of Hardwick Hall, one of the most celebrated houses in England. The Chatsworth of her time was a quadrangular building of surprising height, with an embattled top, massive angles and lateral turrets strengthening its many-windowed walls, as may be seen from a painting of it still preserved at Chatsworth."

Building Bess, as she was called, built Chatsworth, Hardwick, and Oldcoates, three of the finest mansions ever raised by one person in the same county, and these were left to her second son, Sir William Cavendish.

There is a tradition that it had been foretold that she would live as long as she kept building. It is said that at the time of her death she was erecting some almshouses in Derby, and that the work was stopped by a severe frost. Everything was done to enable the men to go on with their work, the mortar was dissolved in hot water and ale, but all was in vain, the frost gained the victory, and Bess died.

It was when Bess was mistress of Chatsworth that Mary Queen of Scots was brought a prisoner here. On her arrival in England Mary was placed in charge of the Earl of Shrewsbury, who, in May, 1570, removed her from Tutbury Castle to Chatsworth. Her establishment at this time consisted of thirty persons, her house steward being John Beton, nephew of Cardinal Beton. This faithful

servant had aided Mary in her escape from Lochleven. He died shortly after coming to Chatsworth, and was buried in the Church of Edensor, where a handsome brass plate was erected to his memory. The Latin inscription is a long one, and the following is a translation of the epitaph:—

> "Beton! untimely have the sisters dire,
> Wound up the young life's thread;
> Gone is the mighty mind: All our desire
> Lies buried with the dead."

During her imprisonment at Chatsworth Mary was allowed by Queen Elizabeth to take exercise on horseback, properly attended. In Sir William Cecil's letter to Shrewsbury, he says: "The Queen's Majesty is pleased that your Lordship shall, when you see tymes mete, suffer ye Queen to take ye ayre about your howss on horseback, so your Lordship be in company, and not to pass from your howss, above one or two myle, except it be on ye moors."

Mary also asked permission to visit Buxton for the benefit of the waters, and after many objections Elizabeth consented, although she greatly feared that her prisoner only sought opportunity to escape. She derived much good from the waters, for she writes: "It is incredible how it has relaxed the tension of the nerves and relieved my body of dropsical humours."

The only memorial of the unfortunate Queen's imprisonment at Chatsworth is a square tower, surrounded by a moat, called Mary's Bower, and situated near the bridge. Agnes Strickland, writing of it, says: "According to local tradition she was accustomed to resort thither for air, when debarred from walking or riding in the park and chase. Nothing can be more lugubrious than the spot, which is moated. . . . . It is approached by a flight of

stone steps, forming a bridge over the deep, dark waters that encircle the mound. . . . . Two dingy yew trees, old, but of stunted growth, face the entrance, and a sycamore with three stems of later date, partly overshadows it. Mary is said to have amused herself by planting and cultivating a flower garden within this

EDENSOR CHURCH.

enclosure a tradition in accordance with her well-known taste for horticulture; but all traces of her Eve-like occupations have departed, for the enclosure is thickly carpeted with turf, and the only flower to be seen within its desolate bounds, when I made my historical pilgrimage to Chatsworth in August, 1847, was a lonely harebell."

In early spring the primroses in Mary's Bower are a beautiful sight. It is not improbable that the yews were planted when Mary was here, or, at any rate, soon after for execution. On the north side of the Bower is a small underground cell with vaulted roof. It is generally believed that there was at one time a subterranean passage connecting it with the house. Search was made some years ago, but no traces of it could be found.

Mary was a clever needlewoman, and spent much of her time in the making of tapestry. Some of her work and the bedstead on which she slept, draped with curtains and embroidered with flowers in coloured silk, worked by her own hands, are to be seen at Hardwick Hall, to which place they were removed from Chatsworth.

Two sons of Bess of Hardwick and Sir William Cavendish were buried in Edensor Church, where a fine marble monument to their memory is still preserved. The second son, William, was created first Earl of Devonshire by James I., and died in 1625. The second Earl was a fine classical scholar, and had for his tutor the famous philosopher, Thomas Hobbes, of Malmesbury. The Earl, accompanied by Hobbes, made a continental tour. Hobbes was acquainted with most of the learned men then living, including Galileo. He spent his latter days at Chatsworth, and wrote many books, the chief being "Wonders of the Peak," and a "History of the Civil Wars."

The fourth Earl of Devonshire was also distinguished for his learning and wit, and played a most important part in bringing about the Revolution of 1688. William III. rewarded him with the title of Duke of Devonshire. He commenced the rebuilding of Chatsworth in 1687, from designs furnished by Talman, the architect. The work was also superintended by Sir Christopher Wren. At

Photo. by BAKEWELL *(Copyright).*

first he intended building only the south front, but, finding that the affairs of the country had become more settled, and perhaps inheriting some of the love of building from his great ancestress, he decided to erect the east front. He then stopped seven years, intending to leave the rest of the work for his heir. Soon, however, he resumed courage, and completed the remaining two sides in 1706. The style of architecture is Grecian.

The fifth Duke married Lady Georgiana, daughter of Earl Spencer. She was one of the most elegant and accomplished women of the day, best known as the "Beautiful Duchess." Their son, William Spencer Cavendish, became sixth Duke of Devonshire in 1811. He was a nobleman of refined tastes, and distinguished for his hospitality, amiability, and benevolence— qualities which endeared him to all.

In 1820 he commenced making great improvements at Chatsworth by erecting the north wing. The designs were prepared by Sir Jeffrey Wyatville, and harmonise well with the general character of the building, being a combination of the Doric, Ionic, and Corinthian orders. The new wing is 385 feet long, and provides kitchens, larders, laundries, offices, servants' rooms, and many other conveniences. The general arrangement of this part of the building is almost faultless.

The grounds also were greatly beautified with rockeries and artificial waterfalls, under the clever superintendence of Sir Joseph Paxton, the head gardener, who built and planned the gigantic conservatory, the first building of its kind, and which is generally regarded as the prototype of the Crystal Palace, also designed by him. The conservatory is covered with 70,000 square feet of glass. The whole building has recently been entirely reglazed and put into thorough repair. Here are to be seen all kinds of

tropical plants—bananas, aloes, tea and coffee trees, oranges, lemons, fig trees, and date palms—thriving almost as luxuriantly as in their native climes.

The fountains at play are one of the sights of Chatsworth. The largest, called the "Emperor," throws a stream of water to a height of nearly 200 feet. The cascade and waterworks were designed by Grillet, after the style of those at Versailles.

The kitchen gardens are situated about a mile from the house, and are most interesting. The largest building is the lily house, built purposely for the Victoria Regia waterlily. These gardens cover an area of twelve acres. Here is the residence built for Sir Joseph Paxton—"a little Chatsworth" as it has been called.

To give a detailed description of the interior of Chatsworth would take up too much space, and for this the reader is referred to the ordinary guide books. Perhaps the most interesting parts are the Painted Hall, Library, Sketch and Sculpture Galleries, the State Apartments, and the Chapel.

The ceiling in the Painted Hall was painted chiefly by Verrio, and represents scenes in the life of Julius Cæsar. Over the fireplace is an interesting tablet bearing the following inscription in Latin: "These well-loved ancestral halls, Begun in the year of English freedom, 1688, William Spencer, Duke of Devonshire, inherited 1811, and completed in the year of sorrow, 1840."

"The year of sorrow" refers to the death of the Countess of Burlington, wife of the seventh Duke of Devonshire, and mother of the present Duke.

To lovers of pictures the Sketch Galleries are a great attraction. Here are sketches by nearly all the old masters, including Michael Angelo, Rembrandt, Raffaelle, Durer, Leonardo da Vinci, Salvator Rosa, Paul

Veronese, and Vandyke. It is probably the finest collection of its kind in the world.

The Library contains some of the most valuable books and manuscripts in existence. Preserved in glass cases are the famous Anglo-Saxon manuscripts of Cædmon and others, also some Caxtons, including "The Dictes and Sayings of the Philosophers," and "Recuyell of the Historyes of Troye." "The MS. of Cædmon," says Jewitt, was executed by Ethelwold, Bishop of Winchester, from 970 to 984. It is a small folio volume of 118 leaves of vellum, and it surpasses in the number and splendour of its pictures, as well as in the rich ornaments of the borders, all the Anglo-Saxon MSS. of the time in England. The paintings are in the very highest style of Anglo-Saxon art, the figures dignified, and the borders of the most exquisite design and colouring, gold and silver being freely used."

The Chapel is one of the glories of Chatsworth. The walls are wainscoted with cedar, and embellished with wonderful carvings of flowers, fruit, foliage, and corn by the great artist Gibbons, and his assistant Watson, a native of Heanor. The sculptured marble around the altar is by Cibber. Over the altar is Verrio's masterpiece, "The Incredulity of St. Thomas." The ceilings of Chatsworth were mostly painted by Verrio and Laguerre.

Pope speaks thus of them—

"And now the chapel's silver bell you hear
That summons you to all the pride of prayer;
Light quirke of music, broken and uneven,
Make the soul dance upon a jig to heaven;
On painted ceilings you devoutly stare
Where sprawl the saints of Verrio and Laguerre."

Rhodes, in his "Peak Scenery," says: "The pencil of Verrio indeed has freely expatiated over the walls of the

Photo. by *Mr. May, Bakewell*

BAKEWELL CHURCH.

(Copyright)

staircases and ceilings in every part of Chatsworth, and gods and goddesses and allegorical personages are introduced into the humble company of mortals, without any great portion of either taste or feeling; and splendid colouring is made to supply the place of elevated design and grandeur of conception. This artist has, in one of his most important works, introduced Sir Godfrey Kneller and himself in long periwigs as spectators of 'Christ healing the sick.'" In the State Music Room is the marvellous painting of a fiddle by Verrio, on a half-opened door, said to have been painted to deceive Gibbons, who had himself deceived so many by his clever imitation of nature in his carving.

Chatsworth contains many examples of the best work of the old Dutch and Italian painters. The "Monks at Prayer," by Granet, and "Bolton Abbey in the Olden Time," are pictures that one is never tired of looking at.

The Sculpture Gallery is admirably suited to its purpose, and abundantly exhibits the power of the chisel in the hands of the most eminent sculptors. Canova's works are the grand attraction. Perhaps the most beautiful are Canova's "Hebe," "Sleeping Endymion," and "Mother of Napoleon," Schadow's "Spinning Girl," Thorwaldsen's "Night and Morning," and Westmacott's "Cymbal Player."

The cellars of Chatsworth are worth seeing. Here are the four enormous casks named the "Four Evangelists," and the smaller ones known as the "Twelve Apostles." Formerly all the beer consumed at Chatsworth was brewed there, but the practice has now been discontinued. It is interesting to note the growth of fungi on the barrels, which sometimes assumes the most fantastic shapes.

The fragments of ancient sculpture preserved in different parts of the building and grounds are highly interesting

and well worthy of study. Of the French and Italian Gardens and other objects of interest we cannot further write, but must not omit to mention certain trees, which are always objects of interest to visitors. An oak was planted by Queen Victoria in 1832, when, as a child of thirteen, she visited Chatsworth. In 1843 a sycamore was planted by the Queen and Prince Consort.

On the opposite side of the river is the pretty little model village of Edensor, built by the sixth Duke of Devonshire on the site of an old village. The villas are built in many different styles of architecture—Swiss, Italian, Norman, and Elizabethan. Its churchyard contains the burial place of the Cavendishes. The sixth and seventh Dukes are buried here; also Lord Frederick Cavendish, who was murdered in Phœnix Park, Dublin, in 1882. The new Church was built in 1870 by the seventh Duke, on the site of an old Norman Church, which was taken down. It is a fine example of the work of the great Church architect, Sir Gilbert Scott, the spire being remarkably elegant.

THE

Practical Cameras,

With McKellen's Patent Spiral Screw Changing System, absolutely reliable.

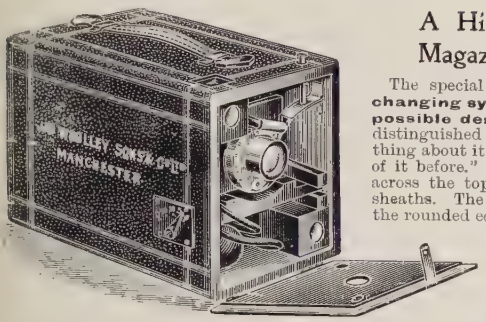


Fig. P151.

A High-class Automatic Magazine Hand Camera.

The special feature of this Camera is the **changing system**, which is of the **simplest possible description.** In the words of a distinguished amateur, "The extraordinary thing about it is that no one has ever thought of it before." It consists of a screw running across the top of and at right angles to the sheaths. The sheaths rest on guide rails, and the rounded edge of each sheath takes into one of the grooves of the screw, the front sheath in the front groove, and so on. The screw is attached to a handle which projects through the back and lies flat. In its normal position it fits on a pin or stud which prevents it from being accidentally moved; at the front end a guide pin projects in the same direction as the handle.

SPECIFICATION.

Measurement—8½×6×5 inches. **Size**—Quarter-plate (4¼×3¼).
Capacity—12 Plates or Films in sheaths.
Changing Arrangement—**McKellen's Patent** Spiral Screw, **absolutely reliable.**
Finders—Two Ground Glass, giving correct images.
Shutter—Everset, with Iris Diaphragm, giving "Time," "Prolonged," or "Instantaneous" exposures.
Covering (No. 8) Cloth, (Nos. 10 and 12) **Finest Morocco** Leather.
Lens—(Nos. 8 and 10) Achromatic Landscape of excellent quality, (No. 12) **Rapid Rectilinear**, working at *f*/8.
Counter—Automatic.

PRICES.

No. 8 CAMERA, as Specification, with Achromatic Lens, and covered in Cloth **£1 1 0**

No. 10 CAMERA, as Specification, with Achromatic Lens, and covered in Morocco Leather **£1 5 0**

No. 12 CAMERA, as Specification, with Superior Rapid Rectilinear Lens, working at *f*/8, and Improved Shutter, and covered in Morocco Leather **£2 10 0**

JAMES WOOLLEY, SONS & Co., Ltd.,

Dealers in CHEMICAL, PHYSICAL, and PHOTOGRAPHIC Apparatus of every description,

Victoria Bridge, MANCHESTER.

The following CATALOGUES sent on application:

Chemical Apparatus.
Physical Apparatus and Scientific Instruments.
Lanterns and Accessories.
Pure Chemicals and Re-agents.
Photographic Apparatus.

By Special Appointment to
Their Majesties
THE KING AND QUEEN.

Winsor & Newton

Limited,

.. MANUFACTURERS OF THE ..

Choicest Colours and Materials for Oil and Water Colour Painting.

SOLE AGENTS for Great Britain, the British Colonies, and the United States of America, for **Raffaëlli's Solid Oil Colours.**

WINSOR & NEWTON'S Colours and Materials may be obtained from the Principal Dealers throughout the World.

Illustrated Catalogue Post Free.

.. *OFFICES:* ..

RATHBONE PLACE, LONDON, W.

HADDON HALL.

A STUDY IN EARLY DOMESTIC ARCHITECTURE.

By Percy H. Currey.

In the consideration of a famous hall such as Haddon it would be possible to base my remarks either upon the historical aspect or the architectural features of the place. To do both within the limits of our pages would be impossible, and I have thought it better to consider the buildings themselves, and to see what can be read of the story told by the actual stones and timber.

The stately pile of Haddon is one of the finest and most perfect examples of a large mediæval house still remaining in this country, and I propose very shortly to point out what were the general arrangements of a mediæval house, and to see how they have been carried out here, and then to take the more important rooms in order and examine them in detail. I may, however, give very shortly the history of the Manor of Nether Haddon, as stated in Lysons' Derbyshire. It belonged at an early period to the family of Avenell, whose co-heiresses married Vernon and Bassett. The heiress of Vernon, in the time of Henry III., married Gilbert Le Francis, who took the name of Vernon. The Haddon branch of the Vernons became extinct in 1565, on the death of Sir George Vernon, whose second daughter, Dorothy - the Dorothy

Photo. by HADDON HALL. *Steward & Co., Buxton.*

of the old romance—brought Haddon to Sir John Manners, in whose family it still remains.

In considering the buildings it is well to remember that Haddon is essentially a house, and not a castle. In all castles, with the exception of the Edwardian Castles in Wales, the central feature is the Keep. When, in later times the need of defence became less urgent and the manner of living less simple, domestic buildings of all sorts grew up in the courtyards, but the Keep remained, as at Windsor and Belvoir, the dominating feature; and the walls, with their fortified gateways and flanking towers, all tell of the original purpose of their erection.

In a house, on the other hand, the central feature is the hall, round which the other buildings were added, though we also find that in early days the house, if of any pretensions, was fortified, as we shall presently see was the case at Haddon, more with a view of resisting sudden attacks than of withstanding a siege or containing a garrison. The hall then was the important apartment in smaller houses, almost the only apartment, in which not only were meals taken but in which all business was transacted, and in which the greater part of the household slept. The other apartments usually found in the earlier houses were a solar, a private bedchamber for the Lord, with sometimes a cellar below, attached to the upper end of the hall, and kitchens and pantries, which seem often to have been wooden buildings of a more or less temporary character, also a chapel. This arrangement of a hall, with the private rooms at the upper end and the kitchen and offices at the lower end, formed the ordinary type of house during the thirteenth, fourteenth, and fifteenth centuries. These, in the case of the larger houses, were protected by a wall, forming one or more courtyards, with perhaps a gateway tower arranged more

or less for purposes of defence; and as life became more complex, and the standard of comfort increased, subsidiary buildings were added around the courtyards. It was not until the Renaissance period of the sixteenth century, when the practice of the whole household dining together died out, that the hall ceased to be the principal building, becoming only a means of entrance to the other rooms, gradually losing its importance, and during the reign of Queen Elizabeth, concurrently with the change in the style of architecture, we find a complete change of practice in the planning of houses. The more or less disjointed style of planning which prevailed throughout the Middle Ages gave place to the symmetrically planned house, which continued in vogue until the nineteenth century; a very good example of the change of style may be seen in this county at Hardwick. The hall is still a large and important room, but it has become evidently an entrance hall, and not the principal room of the house; while the whole place shows a definitely pre-conceived and compact arrangement in place of the loosely grouped apartments of the mediæval house. With the abandonment of the hall it became the fashion to add another room, which seems to have been considered essential in all large houses built during the Elizabethan period, viz., the Long Gallery. Of these we have at least two fine examples in this county, one being added to the mediæval house in the case of Haddon, the other planned as an essential part of the Elizabethan house at Hardwick.

Bearing in mind these usual arrangements of a mediæval English house which I have roughly and, of course, very incompletely outlined, let us see how they are exemplified at Haddon. Of the twelfth century house we have no certain remains except in the Chapel, to which I will refer later. Dr. Cox tells us ("Churches of Derbyshire,"

Vol. II., p. 87) that in the reign of Richard I. a patent was issued to Richard de Vernon to fortify his house at Haddon with a wall 12 feet high, but without battlements. I suppose we may take it that the intention of this reservation was, while allowing the house to be defended, to prevent its being converted into a stronghold and a possible centre of disaffection. Part of this wall still remains on the south side, and very possibly, though now forming part of later buildings, on the east and west. The earliest portions of the existing buildings appear to be the north-east tower and adjoining buildings and parts of the hall, which seem to be of fourteenth century work. The north-east tower seems originally to have been the principal entrance, the approach to the hall being then by the old road over the hills on the east side, and not from the Bakewell Road as at present. This entrance shows the opening for the portcullis, but has no flanking towers or other means of defence. The hall—*i.e.*, the banqueting hall—is stated in Parker and Turner's "Domestic Architecture of the Middle Ages" to be of the perpendicular period, and by Lysons to have been built by Sir Richard Vernon in 1452. One hesitates to offer a different opinion to such authorities, but it is difficult to believe that its two-light windows are of so late a date. In the first place, the porch, which is clearly an addition, is obviously of fourteenth century work; and, again, the windows of the hall, together with those of the north-east buildings, and the thirteenth and fourteenth century windows of the chapel, have been fitted for shutters, and not grooved for glazing. Those of the chapel are the only windows on the ground floor earlier than the Tudor period, which open on the outer walls, and therefore might have been so fitted for defensive purposes; but the windows of the hall, opening as they do into the courtyards, would not need such

Photos by *W. Pilkington, Photo Chemist, Buxton.*

defence, and clearly point to the time when glass was not made in England, and not only looked upon as a luxury, but when used at all was often fitted in a frame, and removed from the windows for safety when not required for use. The oak screen and gallery above it appear to be nearly contemporary with the porch. In the usual position at the lower end of the hall we find the kitchens, bakehouse, and other offices; if examined outside it will be seen that the kitchen has been enlarged at a later period, when the necessity of defence had ceased, by breaking through the outer wall. At the upper end of the hall are found, as would be expected, the private rooms, the beautiful withdrawing room of sixteenth century work, with bedrooms, etc., of the Tudor period, extending over and beyond the original outer wall. On the west side of the lower court there is a long range of Tudor buildings, divided into small rooms, and the finely-designed north-west entrance tower. These buildings seem to have been erected against the original outer wall, which is much thicker than the inner walls, and without any openings on the ground floor. Situated on the south side of the Upper Court are the Long Gallery and the State bedroom, apparently built by Sir John Manners in the time of Queen Elizabeth, over a range of cellars. There is also an interesting series of rooms of about the same period on the north side of the Lower Court. A wooden gallery has been constructed along the east wall of the hall to connect these rooms with the private rooms at the upper end of the hall. The Chapel is at the south-west corner of the building, and is partially outside the walls; on plan it consists of a nave with north and south aisles and a large chancel. In these arrangements it differs from what we usually expect in a domestic Chapel, and the fact of its possessing a font shows it to have been

used to some extent as a Parish Church for the Manor. The arcades show signs of Norman work: the south aisle is much wider than that on the north, but I think we may take it to have been enlarged for the purpose of admitting

Photo by DOROTHY VERNON'S DOOR. *Steward & Co.*

a second altar in the thirteenth century, as on the outside the quoin stones of the original narrow Norman aisle may be distinctly seen.

Having taken this very rough survey of the general arrangements of the house, I think that those who proceed

to examine the building, if they try to grasp its plan, will find that it will give a very good idea of the usual arrangement and mode of living in a large mediaeval establishment. Those who can recall in their minds the plan of any large house of the Elizabethan period, such as Hardwick, will see more clearly than by any written description the great change that took place during the sixteenth century, not only in the style of architecture, but in the general conception of the needs of a house. In every age the buildings show as clearly as a written book the mind of the age in which they were built, and the revolution in the generally accepted ideas of government, religion, learning, and national life that took place in the Tudor period and which are manifested in the buildings of that time to all who can read them.

In making the circuit of the building the following details should be noted:—

The Hall—Fourteenth century porch, screens, and original gallery; the gallery running the length of the hall, added probably in the sixteenth century or even later to connect the rooms at its opposite ends; the windows prepared to receive shutters and bars; the gates at foot of the stairs to keep dogs from the upper rooms. The ancient roof of the hall was, unfortunately, destroyed.

The Drawing Room—Fine perpendicular window and stained glass; the panelling, with the Tudor rose, the date 1545, and the initials G.V.M.V. for Sir George and Margaret Vernon; the painted ceiling; the quaint bay window looking into the garden, its great depth showing it to have been cut through the original outer wall.

The Upper Drawing Room. Panelling of later date than that in the lower room; fragment of tapestry under window-ledge, said to have been made about 1470.

The Private Bedrooms -Outside staircase giving separate access; tapestry.

The Long Gallery—Wainscot of Renaissance period of elaborate and intricate design; ornamental plaster ceiling.

The State Bedroom—Carved chimneypiece; tapestry, known as the "Five Senses"; State bed and furniture.

Rooms at the north end of the Hall— Tapestry; chimney-pieces; wrought-iron window fasteners.

The Chapel—Holy water stoup at entrance; pillars and font of Manners' period; altar slabs, with the five consecutive crosses still visible, now set in the pavement at the east ends of chancel and south aisle; the Squint, by which the ringer in his loft could see the actions of the Priest at the side altar; glass in east window, dated 1427; seventeenth century woodwork in chancel; bell turret built by Wm. Vernon in 1455.

The Garden—Notice the picturesque design of the garden; the terrace wall and steps; the view of the ancient packhorse bridge over the River Wye below; also notice in the passage to the garden from the hall the original outer wall, through which this doorway and the drawing-room bay are cut, and which passes under the private rooms.

A Nature Programme and its Connections.

Adopted by the London School Board.

Containing NATURE LESSONS arranged for Spring, Summer, Autumn, and Winter. STORIES, GAMES, EXPRESSION LESSONS. Free Drawing, Clay Modelling, Cutting, Folding, and Brush Work. By JEANIE MACKENZIE.

Illustrated. *Price 4s. 6d. net.*

The "Helpful" Nature Knowledge Readers.

Adopted by the London School Board.

Containing WELL-WRITTEN LESSONS, setting forth important and instructive features associated with the FOUR SEASONS. SIMPLE and SUITABLE POETRY is included. All the ILLUSTRATIONS have been specially drawn for the books; some of them are *printed in Colours.*

PRIMERS.	Parts I. and II.	Each, Price **4d.**
INFANT READERS.	Book I.	Price **6d.**
INFANT READERS.	Book II.	Price **7d.**
READERS.	Book I. (for Standard I.)	Price **9d.**
READERS.	Book II. (for Standard II.)	Price **1s. 2d.**

Pleasant Physical Culture.

Adopted by the London School Board.

BOOK I. BENEFICIAL AND GRACEFUL EXERCISES WITH A BALL . . . . . .

By Charlotte Dumbell. (With Illustrations and Music.) Price net, 2s.

CHARLES & DIBLE,

LONDON: 10, Paternoster Square, E.C.

GLASGOW: 155, St. Vincent Street.

DUBLIN: 71, Middle Abbey Street.

THE

Educational Newspaper Co.

LIMITED,

3, Racquet Court, Fleet Street, London, E.C.

PUBLISHERS OF

THE SCHOOLMASTER.

(ESTABLISHED 1872)

A Weekly Educational Newspaper and Review. The Organ of the N.U.T. The oldest, largest, and best Scholastic Journal. 1 Year, 6s. 6d.; 6 Months, 3s. 6d.; 3 Months, 1s. 10d. prepaid. This includes all Double Numbers and Supplements. *(Abroad, 10/- per ann.)*

THE TEACHERS' AID.

A Practical Weekly Journal. To assist Head Masters, Head Mistresses, Assistants, and Pupil Teachers, in the work of their Schools, and in their Private Study. Terms of Subscription (in advance) post-free: 1 Year, 6s.; Half-year, 3s. 3d.; Quarter, 1s. 8d., or in Monthly Parts, post-free, 7d.

THE SCHOLARS' OWN.

A Monthly Magazine for Children. Price 1d., post free, 1½d. Subscription, per annum, 1s. 6d. prepaid. Teachers ordering the above direct from the office may obtain quantities at the following reduced terms, post-free.—6 Copies for 7d., 13 for 1s., 22 for 1s. 8d., 26 for 2s., 52 for 4s. By Rail, carriage *not* paid: 100 Copies for 6s. 6d., 150 for 9s. 6d., 200 for 12s. 6d. Specimen copy will be sent post-paid on receipt of post card.

CASTLETON, EYAM, AND TIDESWELL.

CASTLETON.

By W. A. Downham, F.G.S.

Castleton is celebrated for its wonderful caverns, its historical Mam Tor, and Peveril Castle. The castle, so well known to the antiquarian and lover of lore, gives its name to the village, and is immortalised by Sir Walter Scott in his "Peveril of the Peak." It is probable that the original name was Castle in the Peak, for old documents call it the Castle of the Pek, or Peck, or Peveril's Place in the Peke, and latterly the name is Peak Castle, the village nestling immediately below the castle taking the name of Castle Town.

Castleton was formerly difficult of access, the nearest railway station being seven miles away, but now there is a station at Hope, and we may be set down in a charmingly picturesque country within one mile and a half of Castleton village.

Passing along the valley and through the small village of Hope we reach Castleton, situated on the south-western side of the valley, and seemingly surrounded by high hills, except at this particular part; but this is not so in reality, for there is a break in the hilly environment, and a road passes out at the western end, leading to Chapel-en-le-Frith.

Photo. by PEAK CASTLE. *Valentine.*

The castle, or rather the ruin, occupies the summit of an isolated hill, the outer walls forming an irregular parallelogram, the interior being inaccessible, except by an entrance on the eastern side overlooking the valley. At the western angle there is a massive gritstone tower or Keep, about 50 feet high, which consisted of two lofty rooms. The small dimensions indicate that it was never more than a fortress or garrison. The architecture of what is left of the building would lead us to conclude that its erection dated from the Norman period. It belonged to William Peveril, a natural son of William the Conqueror; but it was lost to the Peverils in 1153. King Henry II. gave it to his son John, afterwards King. In 1215 it was in the hands of the rebellious barons. William, Earl of Derby, took it by assault, and was made governor by the King. Edward III., in 1373, granted the place to John of Gaunt, and from thence to the present time it has belonged to the Duchy of Lancaster. The present Constable is the Duke of Devonshire, by whose permission the ruins are thrown open to visitors.

Leaving the domain of the antiquarian, we now turn our attention to other features of interest which are to be seen in this delightful district, for it is from its geological formations that Castleton is so attractive to the visitor.

The strata of Castleton may be described as mountain limestone and Yoredale rocks. The bold precipitous hillsides to the south, west, and east, with their weather-beaten and almost bare-rock surface, show the stubborn resistance that the mountain limestone offers to the forces of change and decay by atmospheric agencies. On the northern side of the Hope valley we have hills of Yoredale rocks and shales, in places capped by millstone grit, but with the exception of Mam Tor there is an absence of bold, precipitous sides, for the shales have crumbled

away until the ascent from the valley for some distance up the hillsides is a gradual inclination.

The hill called Mam Tor, or the shivering mountain, is one of the sights of Castleton. It is a hill composed entirely of Yoredale rocks and shales; the side facing Castleton has been so acted upon by the weather that it presents a bold and almost vertical face of exposed rock and shale for a height of upwards of 400 feet above the roadway at the bottom. The shales are constantly weathering away and falling to the foot, where a large mass of detritus has accumulated, and is slowly pushing its way into the valley below. The constant wasting away of the shales has suggested the name of the "Shivering Mountain." The beds of hard rock are a support to the shales, and it is this support from these beds that protects the mountain side from rapidly wasting away, and causes it to retain its almost vertical face. The top of Mam Tor is 1,100 feet above Castleton, and 1,700 feet above sea level. A journey to the top will repay the visitor who wishes to have an extended view over the beautiful valley of Edale, with the enormous landslips on the opposite side of the mountain, and of Kinder Scout rising to a height of 2,088 feet above sea level. The roadway at the bottom of Mam Tor, winding round to Castleton, may be taken as the boundary line between the Yoredale rocks and the mountain limestone, the latter dipping under the former to an unknown depth.

Near the roadway, and opposite the footpath leading to the gap of Mam Tor, on a ridge of limestone, is Windy Knoll. At this place a remarkable accumulation of bones of bison and reindeer has been found. The bones were first noticed in the quarry in a fissure, which, on being followed up, was found to communicate with a basin in the limestone, containing a vast number of bones of bison

and reindeer, with some of the grisly bear, wolf, fox, hare, etc. The spot is believed to have been a drinking place used by herds of reindeer and bison during their migrations to and from the Cheshire plains.

Caves or Caverns.—There is no lack of magnificence or variety in the caverns of the Castleton district, for within a radius of about one mile from the centre of the village the visitor can see both natural and artificially-worked caverns of very large extent. The study of the geology of the district will help us to understand how these were formed. Owing to natural dislocation and distortion of the limestone there are numerous breaks and fissures from the surface downwards, some of which are now filled up and are forming lead veins; others open, down which the natural drainage of the surface-land descends and is lost to view. Such holes are named "swallows," and many of these are to be found south and west of Castleton. In some cases a considerable stream of water disappears suddenly down one of these swallows, and, flowing along various subterranean passages, issues from a hole or fissure at a much lower level some miles away. Such water may be more or less charged with carbonic or other gas, which would have an erosive action upon limestone, dissolving and carrying it away, and so enlarging its area of passage. In some cases the limestone walls offer a stubborn resistance to the action of water, whereas at other points the limestone is more easily acted upon. In the latter event an enlarged space is readily made, where, after ages of corrosion, a cavern is formed, whose sides are more or less constantly agitated by the inrush of water which washes away the walls, until man, in search of minerals, lets loose or diverts the impounded water, and a cavern is discovered, to become the show-place of the district.

Photo by CASTLETON. *Mr. Gardner, Buxton.*

Peak Cavern and the Blue John Mine are the principal caverns. A visit to these will convey more than words can express. The water now flowing through the Speedwell level into the Peak Cavern and out below the castle is supposed to come from the swallows at Sparrow pit, two miles south-west of Castleton; thus the waters on the western side of the watershed, flowing towards the Mersey basin, suddenly change their direction, and flow eastward into the Derwent. The Blue John Mine was first accidentally discovered in some mining operations. It consists of a number of chambers connected by tortuous pipes or fissures, and extending for a considerable distance. The Blue Fluor spar, or Blue John as it is termed, occurs as a lining on the walls of the fissures and pipes, or in concentrically-arranged layers. It is worked generally in the winter, and sold in small lumps for the manufacture of ornaments, usually after treatment with acid to intensify the colour.

The Speedwell Level.—This level is entered by an opening at the foot of the Winnats. As the lead veins in the Peak run from east to west it was imagined that a drift cut from north to south would intersect them and open out a field containing abundance of ore. The level therefore was driven to clear the mines of water, but, unfortunately, it failed.

Some of the dales and ravines of this district have been formed by the action of streams, assisted by the mechanical action of frost, as, for example, the Winnats (Windgates), near Castleton, and Cave Dale. In the latter case the stream flowed down, wearing out its passage, until it met with an outcrop of vesicular lava, a column of which is still *in situ*. The degradation of the lava puddled the limestone, and rendered it impervious to the water, until a swallow hole was reached, when it took a sudden drop

into Roger Rain's chasm in Peak Cavern. The roof and walls having fallen in, this underground passage became the lovely dale, which is now the haunt of the fossil hunter.

The lead veins which traverse limestone districts, of which many old workings are to be seen here, appear to be cracks or breaks in the limestone, which have been filled up by mineral deposit, commencing on each side of the cracks, until meeting in the middle, the whole becomes a solid mass of calc-spar, barytes, and lead ore.

The mining history of Castleton is a record of past glories, of work commenced under crude conditions, and involving much physical labour to obtain what was then absolutely necessary for the defence of the country, as well as for the domestic comfort of its inhabitants and the protection of its buildings. Lead ore may still exist at greater depths, but until it commands a higher price in the market, and modern machinery is erected, it is very probable that Castleton will remain a place of holiday resort for the pleasure seeker, and a place of study to the archæologist.

EYAM.

Eyam is a village and parish in the northern High Peak district of Derbyshire. It is comprised in the Hundred of the High Peak, and in the diocese of Southwell.

The origin and signification of the name of this old English village is not quite clear. In the Norman Survey the name was written Aiune; in the fifteenth century and later it was written Eyham and Eham; now, uniformly, Eyam. It is very probable that the word means *water* or *water place.*

The village is seven miles north of Bakewell, and about three miles to the south-west of Grindleford. It comprises one long street, nearly a mile in length, built

Photo by *Oppenheimer.*

THE WINNATS.

apparently, as it is approached from Middleton Dale, on a ledge or table-land of limestone. The street runs from east to west in a serpentine form, over the boundary line between the limestone and the sandstone. The houses and church on the north side are built where the shales and sandstone commence; while those on the south side are erected invariably on the limestone, and though the village is so very long the same diversity occurs practically throughout.

Contiguous to the street, and nearly in the centre of the village, stands the Church, a very ancient fabric, which, from its being encircled by beautiful limetrees, has often excited the admiration of strangers. Affixed to the south wall is a very fine old sundial.

The geological features of Eyam and its immediate locality are extremely interesting. As previously mentioned, Eyam is built on a rocky ledge or table-land of carboniferous limestone; while northward, and contiguous to the village, the superjacent shale formation rises abruptly to a great altitude, where it is capped by the millstone grit.

The Yoredale Rocks, which are next in order of succession to the carboniferous limestone, have been met with in several mines between Eyam and Matlock, and have been proved to be nearly 400 feet thick. It is, however, in the limestone formation that the most interest is taken. Great natural caverns occur at Eyam as in other limestone areas; some of great extent are said to pass under the district, but are seldom, however, to be explored to any distance owing to the great quantity of water. In this locality the phenomenon of streams pursuing a subterranean course is of frequent occurrence. Numerous swallows occur; the largest of them is a great open chasm known as the Waterfall. An examination of the district

shows that there is a dry valley, representing the old water-course, extending from the great open chasm which gives rise to the waterfall, to the end of Middleton Dale. Part of this old channel is known as Linen Dale. At present the stream pours into the chasm and disappears, to find its way, together with the waters from neighbouring swallows, to the valley of the Derwent by way of Middleton Dale. Various causes determine the spot at which the stream takes to its underground course. There are, for example, numerous swallows along the junction of the Yoredales with the limestone. Again, an open fissure is sufficient to determine the commencement of the subterranean course, and, bearing in mind the relationship between fissures and mineral lodes, it would be remarkable if the latter were not closely connected with swallows. This is the case at the Waterfall. The chasm occurs at the intersection of the Cross Low and the Black Hole veins; and there are numerous instances which point to the fact that these underground streams frequently follow the course of the lodes. The Pippin Swallow, near the Waterfall referred to, is a good example of this.

The limestone in this district is rich in fossil organic remains. They are exclusively of marine origin, consisting of corals, shells, and encrinites; the latter are so abundant in some places as to take the name of *encrinital* limestone, as at Water Grove quarry, a short distance from Eyam. The most numerous fossil shells are the terebratula, producta, and spirifer. The limestone of the district contains numerous veins of galena, or lead sulphide, which have been extensively worked, and is interstratified with beds of igneous rock, known locally as "Toadstone," a fact which bears witness to contemporaneous and probably submarine volcanic outbursts.

The scenery of Eyam and district is highly varied and

picturesque. The visitor, arriving at the nearest railway station—that of Grindleford Bridge—would pass through Grindleford, and, ascending the long steep road over the edge of Eyam Moor, gets a lovely view of the Derwent, winding its way towards Bakewell. In the valley is the little village of Carver, with Baslow in the distance. Rounding the corner at the top of the hill we look down upon Stoney Middleton, situated at the eastern end of Middleton Dale. Just before entering the village of Eyam, and situated on an eminence about 200 yards from the roadway, is Riley, or the Hill of Graves—a noble and pleasing feature in the romantic character of the village.

On the south side of the village two dells branch parallel with each other into Middleton Dale. Passing down one of the dells, known as Eyam Dale, we have a beautifully wood-clad slope on the right, locally known as the rock gardens, in which is to be found a large cavern. On the opposite side the limestone rock towers up to a great height. In the quarry at the southern end, and abutting on Middleton Dale, are to be seen a great many bands of chert embedded in the limestone. Leaving this dell, and proceeding a short distance up Middleton Dale, is the other dell, a most secluded and beautiful place, locally known as the Delf, the entrance being called Cussy Dell. Hanging tors, pensile cliffs, shadowy trees, blooming flowers, and a winding rill are only a few of the rural charms of this incomparable dell. Here is also to be found "Cucklet Church," where the Reverend William Mompesson stood and preached to his obedient and faithful flock who assembled on the opposite side of the dell.

At the western extremity of this lonely retreat is an extensive chasm or cleft, known by the undignified appellation of Salt Pan. It is deep and narrow, and extends throughout the whole mass of limestone rock. A small

stream issues from the mouth of the chasm, and winds its way amongst beds of moss, fern, and flowers. Leaving the dell, and passing where the old windmill, immortalised by John Platts, of Eyam, once stood, and entering the village, Eyam Hall, a fine old mansion with ivy and other climbing plants clinging to its walls, is situated on the north side of the village green, in the centre of which still stand the old village stocks. Such is a portion of the very imperfectly-described scenery of this secluded village.

It is, however, its desolation by the plague, in the years 1665 and 1666, that Eyam has attained to fame. All who tread the green fields of Eyam should remember, with feelings of awe and veneration, that beneath, there repose the ashes of those heroes, who, with a sublime, heroic, and an unparalleled resolution, gave up their lives—yea! doomed themselves to pestilential death, to save the surrounding country. Their magnanimous self-sacrifice, in confining themselves within a prescribed boundary during the terrible pestilence, is unequalled in the annals of the world. From the autumn of 1664 to December, 1665, about one-sixth of the population of London fell victims to this fatal pestilence; but at Eyam five-sixths of the inhabitants were carried off in a few months of the summer of 1666. It is believed that this terrible disease was brought from London to Eyam in a box of clothes sent to a tailor who lived in a cottage on the west side of the churchyard.. The box is supposed to have been first opened by the tailor himself, as he was the first victim who fell a sacrifice to the fatal malady. In removing the articles he noticed how damp they were, and so hung them before the fire to dry. While he was watching them he was suddenly seized with a violent sickness, and other symptoms of disease, which greatly alarmed the family. On the second day he grew seriously worse. At intervals

he was delirious, and large swellings began to rise about the neck and groin. Medical aid was of no avail. On the third day of his illness the fatal token —a round, purple spot, the plague spot— appeared on his breast, and he died in dreadful agonies the following night, the sixth of September, 1665. From this time the plague continued with varying severity.

The inhabitants thought of escaping death by flight. Mompesson energetically remonstrated with them on the danger of flight. He told them of the fearful consequences that would ensue; that the safety of the surrounding country was in their hands; that the invisible seeds of the disease lay concealed in their clothing; that it was impossible for them to escape death by flight. The inhabitants, with a superhuman courage, then gave up all thoughts of flight. "One can scarcely decide," says Mr. Samuel Roberts, "in this case, which most to admire—the wisdom of the pastor or the obedience of his flock."

In June the plague spread with fearful rapidity. Funeral rites, coffins, and shrouds were dispensed with, a half-made grave, or a hole in a field received the corpse ere life was quite extinct. Mompesson now thought it dangerous to assemble in the Church, and he afterwards met his flock in the Delf. Here this faithful minister prayed that God would stay the pest, whilst the surrounding hills echoed the fervent responses of his sorrowing people. From that period the arch in which Mompesson stood has been called "Cucklet Church." Among the victims in the month of August was the amiable wife of Mompesson, and terrible as was the devastation of the pestilence, yet the few inhabitants that were left seemed to forget their own sufferings in the death of Mrs. Mompesson.

The people of the village from east to west shut them-

selves up in their houses, nor could they be prevailed upon to cross a small stream eastward, which runs under the street at Fiddler's Bridge, and it is commonly asserted that the plague never crossed it westward. On the 11th of October, 1666, this awful fight with death ceased, after five-sixths of the population had been swept away. The number who perished is stated in the parish register to be 259. This is certainly appalling when we consider the population at the commencement only amounted to 330.

TIDESWELL.

By W. A. Downham, F.G.S.

Representatives to Conference desirous of visiting Tideswell would, on leaving Buxton, proceed down the lovely Ashwood Dale and Miller's Dale as far as Miller's Dale Station, a distance of about five miles, which may be traversed either by train or on foot. The beauty and magnificence of the scenery along the whole route is scarcely to be surpassed in the country. Here we have an object lesson on the action of running water. The stream has worked its way through the limestone rock, in some parts having only a narrow channel bounded by high precipitous cliffs. These dales were at one time underground watercourses, the roofs of which have been worn away by atmospheric agency. Cave Dale, at Castleton, and Dovedale are similar instances. Taking the lower road at Miller's Dale, and passing under the railway bridge which spans the River Wye, the visitor may see at a glance the result of two forces which have been at work to produce the beautiful scenery of this charming district. In the upper slopes of the dale we see that portion of the valley which has been carved out by the glaciers of bygone

Photo. by TIDESWELL CHURCH. *Mr. Chapman, Tideswell.*

days, whilst in the steep precipitous sides, both on the right bank of the river standing out from the water, and also on the left side of the roadway, may be seen the wearing action of the water since those glacial times. Along the roadway a little further on may be seen large quantities of toadstone. To anyone interested in the volcanic rocks of the district, a better example may be found about a mile nearer Tideswell. Proceeding up the hill by the road, and rounding the top, we come to a very sharp turn in the road. Looking across the beautiful valley known as Tideswell Dale, on the opposite slope we notice an old marble quarry, well known to geologists on account of baked columnar clay underlying the toadstone having been found here. H. H. Arnold Bemrose, Esq., M.A., F.G.S., read a very valuable paper on this subject before the members of the Geological Society, in London, on March 8th, 1899. He concludes the paper as follows: "The toadstone of Tideswell Dale consists of lava flows, between which a sill has been intruded. This sill, which is from 60 to 70 feet thick, cuts across the lower portions of the lava, and sometimes reaches the limestone below, but never approaches near enough to the limestone above the lava to metamorphose them. The extent of alteration of the subjacent limestone and the clay in any place depends mainly upon the proximity of the sill to them. . . . . At some time posterior to the intrusion of the dolerite among the lavas, the area between the two faults (north and south) has been uplifted, and later still the valley of Tideswell Dale has been eroded through the igneous rocks, and through the limestones above and below them."

Proceeding up the romantic dale we come to the small market town of Tideswell, which is often looked upon as the capital of the Peak. It is popularly supposed to derive

its name from a well or pond—locally called the ebbing and flowing well—situated near the roadside. In olden times these intermittent springs (which are not uncommon in limestone areas, and are due to a kind of natural syphon in the formation of the rocks) were supposed to be dependent on the tides. Hence we get the name of Tides Well. It would be rather difficult, however, to find any connection with the "tides," especially at an elevation of nearly 1,000 feet above sea level.

The population of the town of Tideswell is about 1,900, and that of the whole parish a little under 3,000. The houses are for the most part built of limestone, and the inhabitants employed at the lime quarries, in the building trade, in farm work, and in weaving, cotton doubling, or velvet cutting. Tideswell is a small market town, though not so important now as formerly.

The chief feature of interest is the Church, which is popularly described as "the Cathedral of the Peak." Every visitor will be struck by the fact that it is the most important edifice in the place, and that all other buildings sink into insignificance beside it.

The main entrance into the Church is on the south; but visitors usually enter through the north porch. The total length of the Church is 145 feet, and its width, including the transepts, 87 feet. The present building was commenced about 570 years ago, and completed half a century later. Its probable date is between 1330 and 1380. There was, however, a Church in existence long before this. Possibly a more substantial Church occupied the site of a still earlier Saxon Church. It is supposed that the earlier Church stood where the present chancel now stands, and traces of the Norman style of architecture are observable amidst the rubble-walling work which is exposed on the inside of the chancel arch.

From a paper read by the late Canon Andrew before the British Archæological Association, on their visit to Tideswell in 1899, we cull many of the following facts: In it he states that the Church was built in the middle of the fourteenth century. The roofs of the nave, transepts, and chancel were of uniform height, the side aisles being at a lower height. The tower has retained its height and special features from its erection near the end of the fourteenth century to the present time, and is like that of Magdalen College in Oxford, but of earlier date and less ornate. At the late restoration, which occupied over 30 years, the roof of the chancel was raised some twenty inches above those of the nave and transepts. The date of the chancel is guessed at by the fact that the date 1358 is placed on Sir John Foljambe's brass, the inscription thus showing that his burial took place soon after the present chancel was built.

The upper part of the chancel was so arranged as to make room for a sacristy under the large east window, immediately behind the stone reredos, to which was attached the massive stone altar. This reredos takes in the entire width of the chancel, and is pierced by one door at the north end of the reredos. This reredos contains two large stone niches, supposed formerly to contain figures. The use of the sacristry was to receive the vessels and vestments after Holy Communion.

The position of this sacristry is fixed by the position of the piscina, or drain, wherein they washed the vessels after use at the Holy Communion, and the adjoining sedilia for the clergy were used at certain portions of that service—the middle seat for the celebrant, with the deacon on one side, and the sub-deacon on the other—the arms of the province (Canterbury on one side, and Lichfield on the other) with those of the new Diocese of Southwell in

the middle. All these stone arrangements are original, and are fine examples of Gothic architecture.

The effect of this chancel is almost unique. It is one gallery of light and beauty, and yet it is singularly free from trifling ornament. All is massive, and grand, and dignified. The side windows might, to persons unacquainted with the details of Gothic architecture, be mistaken for windows of the perpendicular or even later period. But the date of them is readily recognised by persons conversant with the details of the various styles. The mouldings are all pure decorated mouldings. The proportions and tracing are most interesting from their grandeur and simplicity. The large proportions of the chancel, so unusual in a Parish Church, strike one immediately upon entrance. But Tideswell never belonged to any monastery. It was always a "secular" and never a monastic church.

In the middle of the chancel is the tomb of Sir Sampson Meveril, dated 1462. The brasses on this tomb are very interesting. The tomb is remarkable also for the rudely-formed crosses incised on it, showing that it had temporarily been used as a stone altar, the priest celebrating with his face towards the south, but under what circumstances, and for how long, we have no existing records, yet sufficiently plain as indicating the struggle to retain stone altars, after the original ones had been swept away.

Between the chancel and the nave is a beautiful screen, the lower portion of which is almost as ancient as the Church itself, and the gates are the original ones. In olden times there possibly stood above the screen a rood loft, or gallery, in which a crucifix was placed, and from which the Gospel was preached.

The carving at the ends of the pews is well worthy of

attention. It represents holy baptism, confirmation, and the various offices of the Church.

The coloured glass in the fine east window was the gift of Lord Hawkesbury, and is in memory of his wife, who was niece of the late Duke of Devonshire, and of their second son, both of whom died in 1871, and also of John Foljambe and other ancestors, who were buried in the Church more than 500 years ago. The artists were Messrs. Heaton, Butler, and Bayne, of London.

On the north side of the chancel, within the altar rails, is the tomb of John Foljambe, who died in 1358. Near by is perhaps the most interesting memorial in the whole Church. It is the brass to the memory of Bishop Pursglove, the founder of the Tideswell Grammar School. In the centre of the stone is a full-length effigy of the Bishop, in complete eucharistic vestments. There is also a large brass affixed to the wall in memory of the late Vicar, the Rev. Canon Andrew—1864 to 1900. Behind the organ are two stone effigies representing female figures, of which there is no description. The oldest probably dates back to the latter half of the thirteenth century, whilst the other figure, wearing a veil, and with her feet resting on a dog, would be about 1375.

There are many other points of interest connected with the Church too numerous to mention in this short article, and we will sum up in the words of Dr. Cox, who, writing of the Church ("Churches of Derbyshire"), speaks "of the delicacy yet boldness of the mouldings, of the effective character of the buttresses, of the grace of the tracery, especially of the transept windows, of the finish of the parapets, and of the proportion of the component parts, that all combine in the production of a building of singular beauty, and one which it would be no easy task to equal by any of like size in the kingdom."

Photo. by DOVEDALE. *Valentine.*

AN INVITATION!

DELEGATES and others attending the **N.U.T. Conference** are respectfully invited to inspect the

NEW SCHOOL SPECIALITIES

OF

A. Brown & Sons LIMITED,

Which will be on view at the Publishers' Exhibition.

The attention of Progressive Teachers is specially directed to our **New Series of Historical Pictures** designed by a well-known Artist to illustrate the **Social History of the English People** from the earliest times to the present day.

London: A. BROWN & SONS LTD., 5, Farringdon Avenue, E.C.

And at HULL and YORK.

GREAT NATURAL CURIOSITY.

POOLE'S CAVERN,

BUXTON.

"The first Wonder of the Peak."
—*Charles Cotton.*

Ten Minutes' Walk from the Crescent.

Effectively Illuminated with Incandescent Gaslights throughout the Day.

The Cavern, for beauty and extent, far surpasses anything of the kind yet discovered in the United Kingdom. The sides and roof are adorned with massive Stalactites

Visitors may view the Cavern without any inconvenience whatever, there being a broad gravel footpath running the full length.

THE MUSEUM

In connection with the Cavern contains Relics of the Romans which have been found in the Cavern at different periods; also a large collection of old English Carvings, &c., &c.

BATHCHAIRS CAN BE TAKEN INTO THE CAVERN.

Admission 6d. each.

F. REDFERN, *Proprietor.*

DIPLOMA
Correspondence College,

FISHPONDS, BRISTOL.

Principal:
J. W. KNIPE, L.C.P., F.R.S.L.

Resident Vice-Principal:
S. H. HOOKE, B A. (Hons. Lond.).

Professors and Tutors
by whom our Tutorial Papers are drawn up:

W. J. Addis, B.A. Lond.
T. Cartwright, B.A., B.Sc.
C. E. Cullis, M.A., Ph.D.
H. T. Mark, B.A., B.Sc.
J. C. Nesfield, M.A. Oxon.
H. F. Wright, M A., LL.D.
Henri Blouet, B A.
E. E. Elt, B.Sc. Lond.
E. B Le François.
W. Halliwell, B.Sc. Lond.
W. Harrison, M.A. Camb.
T. S. Heppenstall.
C Hepple, B.Sc. Durham.
G W. Jones, B.Sc. Lond.
J. Lockey, M.A. Lond., F.C.P.
A. Smith, B.Sc., L.C.P.
J. H. Theakstone, A.C.P.
W. Whistler, B.A., B.Sc.
A. E White, B Sc. Lond
T. W. Wormell, B.Sc. Lond., F.C.S

The Largest and Most Successful Correspondence College.

,, Courses begin every week for ,,

SCHOLARSHIP,
CERTIFICATE,
MATRICULATION,
A.C.P. DIPLOMA.

Separate Prospectus for either Exam., containing the latest Regulations and Syllabus, POST FREE on application to

THE SECRETARY,

DIP. CORR. COLL., FISHPONDS, BRISTOL.

DOVEDALE.

By Rev. W. Fyldes, M.A.

Probably no line in England of the same length can compare with the London and North-Western Railway extension from Buxton to Ashbourne in the wealth and grandeur of the scenery lying in the immediate neighbourhood of its various stations. The incomparable Dove Dale, the pastoral beauties of the Manyfold Valley, the almost absolute seclusion of Lathkiln Dale, and the fairy-like glen of Beresford Dale, with its historic fishing house, these, with their grey limestone rocks, their subterranean water courses, and their wonderful caves, conduce to render this part of the country in many ways unique. To see Dovedale to perfection one should begin at the head of the Dale—that is, Beresford Dale, and walk through to the Isaak Walton. The most convenient method of effecting this is to make Hartington the starting point, an ancient and interesting town lying at the head of Dove Dale. The original old parish of Hartington is an unusually extensive one, about 16 miles long. For centuries it has been divided into four quarters—called the town quarter, middle quarter, nether quarter, and upper quarter. The town gives the second title to the Dukes of Devonshire—the Marquis of Hartington. Its fine old Church contains some most beautiful specimens of Early English and Decorated architecture. The well-proportioned tower with its handsome buttresses cannot probably be equalled in Derbyshire.

A pleasant walk of about fifteen minutes over the fields from Hartington, leads to the entrance of Beresford Dale. The first object of interest is the celebrated Fishing House, sacred to all anglers, built by Charles Cotton to commemorate the friendship between himself and Izaak Walton. Passing on by the river, on the Staffordshire side, is seen a bold and massive rock on the right bank, the top of which affords a view on to the dale below of singular beauty. Following the course of the river, another bold and perpendicular rock is seen rising from its bed, known as the Pike Rock, that portion of the river in which it stands being named Pike Pool. From this spot the view on all sides is most striking. This enchanting dale ends at the Bear's Ford (Beresford). Report says the last bear in England was killed here.

At the end of Beresford Dale, crossing the river by the footbridge and following its course through a beautiful meadow, a part of Dovedale is entered, which possesses a feature entirely its own. For a mile and a half the scenery is wild and weird in the extreme. The bleak and bare sides of the hills, sloping down to the river side, gives it an impressive loneliness which fills us with its mystery. Below are the Peasland rocks on the Staffordshire side.

From this point the aspect changes, wooded hills and towering rocks are the chief feature for another mile. From June to October this particular length of the Dale is a natural garden of wonderful beauty. Wherever one looks the effect is fine, the open and grassy glade presenting fresh views at every turn. Beyond the next bend of the river, which is almost at right angles, the smooth verdure of the hill sides is in strong contrast to those lately passed. After another mile Load Mill is reached. For a short distance the road follows the Staffordshire side of the river, terminating at Mill Dale, a

lovely little hamlet. Crossing by the Wheelbarrow Bridge, the part of the Dale succeeds which is usually seen by visitors, who enter it by the footpath from Alsop-en-le-Dale Station. It is the part of the river chiefly remarkable for the variety and grandeur of its rocks, cliffs, and caverns. Almost every turn presents new and singular objects of interest. A large rock on the right is the Raven's Tor. Below are the circular-arched caves called Doveholes, of remarkable construction. The rising ground just beyond affords a panorama of perfect beauty. Some most remarkable natural phenomena follow. On each side of the river is a huge perpendicular column, known as "Pickering Tors," which are indeed "stately and air-braving towers," placed as if they were intended to be a gateway to this part of the Dale. Just beyond them, like the guardian of some wizard hall, the Lion's Face looks down, silent and impassive, as if shaped by the hand of man in some distant past. Higher up and some distance ahead, may be seen the Watch Box, a huge protruding square block of stone, so placed as to convey the idea of its being artificially poised or supported. Passing on, at the Straits the river is flanked on each side by the rocks so closely as to render stepping-stones necessary as a means of passage. The compressed beauty of this particular spot is in strong contrast to the expansive view preceding it. The dark overhanging branches of the yew, growing out of the crevices in the rocks, give a special beauty to their surroundings. The next object of interest is Reynard's Cave. To examine it involves a severe climb up the bank, but the exertion is rewarded by a beautiful view. Approaching from Reynard's Cave, the Dove Dale Spires, commonly called Tissington Spires, a group of lofty rocky pinnacles on the Derbyshire side, are best seen. On the opposite side, partly hidden among the trees, is the huge

rock named Dovedale Church, so called from a portion of the surface which is supposed to resemble a pulpit. A walk of a short distance leads by a gradual ascent to Sharplow Point, a conical rock on the bank of the river, which is far below, almost in a ravine. From the top of this rock is obtained a most entrancing view of the Dale in both directions, but more especially of the woods on the opposite bank. In the spring, when these woods are bursting into leaf and the tender green of the larches is contrasted with the dark foliage of firs, and the silvery leaves of beautiful beech trees, the sight is one which the eye is truly never weary of gazing at. From this point the path descends until the river level is reached again. The walk onwards to the bend of the river is different from, but not less lovely than, anything seen before. At the foot of the hill, on the opposite side, are the Tors, called the Twelve Apostles, partly hidden by the spreading branches of the trees. From this spot the river winds its way through beautiful grassy lawns, so soft and fresh and green as to make one imagine they are carefully kept and cultured. The river then turns in a southerly direction, having Thorpe Cloud on the left bank and the huge hill of Bunster on the right. These two hills form the southern entrance into the Dale, and the walk from this point to the "Izaak Walton" is worthy of the very closest attention. The river now wends its way through open meadows in front of the Izaak Walton Hotel for a distance of a few hundred yards, and then receives the waters of the Manyfold. This stream and the Dove are each so beautiful that it is difficult to ascribe superiority to either of them. The visitor leaves the river at the southern end of the Dale, and, ascending the hill in front, reaches Thorpe Cloud Station, from which he can proceed either in the Buxton or the Ashbourne direction.

A HINT for Conference Visitors:—

L. & C. HARDTMUTH'S Stall

Is at the TOWN HALL,
facing the Reception Room.

AN OPPORTUNITY
is afforded to
every Visitor
to try

WATERMAN'S IDEAL . . . FOUNTAIN . . PEN. . . . .

Invaluable to Teachers, Students, Writers, all who work with the Pen. It is Pen Luxury and Pen Perfection. Always handy, always ready for use, free from leakages or blotting.

From 10/6, of Stationers. Jewellers &c.

L. & C. HARDTMUTH'S

Famous KOH-I-NOOR Pencils

ARE FIRST IN EVERY PENCIL MERIT.

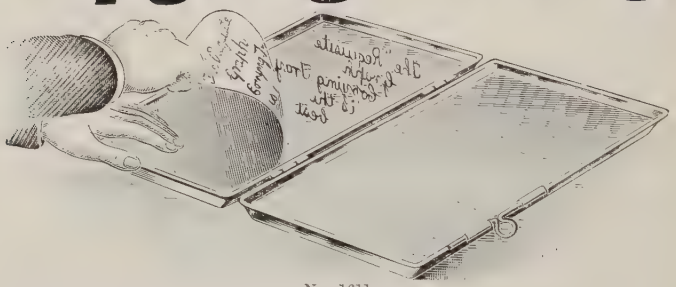
They have long held the lead, and are considered the best by all who use pencils. They are made by a firm with a world-wide reputation for writing materials, and every pencil turned out has qualities no other makes possess. **Hardtmuth's Pencils** are excellent for scholastic purposes, and are used extensively by the London School Board. They are also in general use in Colleges, Schools, and Commercial Houses. Wherever there is a pencil want, **Koh-i-Noor Pencils** fill it.

Of Stationers, Artists' Colourmen, and Photographic Dealers.

L. & C. HARDTMUTH, 12, Golden Lane, LONDON, E.C.

Great Improvement.

THE "REQUISITE" GRAPH
Copying Tray.



No. 1611.

Being an extra strong Duplex Zinc Tray, Hinged, with bolt for fastening in front. Size when open, 20½ by 14 inches; to take two sheets large foolscap. Containing 4 lbs CELEBRATED 'REQUISITE' COMPOSITION, viz.: 2lbs. each side.

As supplied to the London School Board.

Retail Price only 10s. 6d. Complete.

A's Quarto size filled, 5/- complete.

The "Requisite" Graph

COMPOSITION.

Seventy to eighty distinctly perfect copies of an original letter, and may be used several times without re-melting. Can be made ready to take another original in five minutes after previously using. These are absolutely the best results ever obtained.

In 1lb. Tins (for Refilling) Retail per Tin, 1/6.

Is the Best in the Market.

REQUISITE "GRAPH" INK,

for use with the above, **1/- per Bottle.**

GEO. WRIGHT & CO.,

SOLE MANUFACTURERS & PROPRIETORS,

6, Farringdon Avenue, London, E.C.

MATLOCK.

By G. J. Rowland.

The scenery of the Matlock district is at one with that of the rest of the Peak.

Taking up the journey by rail from Buxton to Matlock at Rowsley, away on the right will be seen a square prospect tower, a short distance from which is a stone, called the Gorse Stone, a name derived from the Celtic "gorsed dau," or setting aloft. It is believed to have been one of those sacred places from the summit of which the Druids gave their laws, and made solemn orations to the people. Anyone visiting the spot will have no difficulty in selecting the stone, as, in 1832, Earl Grey's coronet was carved upon it. The Stancliffe gritstone quarry is soon passed on the left. This quarry is noted for the size of its blocks, and for the excellence of the stone. It was here the lions of St. George's Hall, Liverpool, were quarried and sculptured. The late Sir Joseph Whitworth bought the quarry, planted it with rare trees and shrubs, making it into beautiful ornamental grounds for his seat of Stancliffe Hall, but now that he is dead it has reverted into the hands of the quarryman.

On the opposite side of the line, and within a hundred yards of it, stands Darley Church, with its giant yew tree; this, as it is the largest yew, is also believed to be the oldest tree in Britain, and has probably weathered

Photo. by MATLOCK & DALE AND HIGH TOR *Valentine*

the whole of the storms of the Christian era. Still further beyond the Church, and across the River Derwent, may be seen the one lead mine, which now bears testimony to the ancient riches of the Derbyshire hills. For many years it has yielded upwards of 5,000 tons of lead ore annually.

Two miles from Darley, Matlock Bridge Station is reached, and Matlock Bank, the British headquarters of hydropathy, is seen on the left, occupying the escarpment of the mill-stone grit facing south-west. Matlock Bank is ascended by a cable tram, which was presented by Sir George Newnes. Leaving the railway at Matlock Bridge we enter the scenery for which Matlock is so justly renowned. Of this the late John Ruskin wrote: "Speaking still wholly for myself, as an epicurean anchorite and monastic misanthrophite, I pray leave to submit, as a deeply oppressed and afflicted brother of that Order, that I can't find anything like Derbyshire anywhere else. 'J'ai beau,' as our polite neighbours untranslateably express it, to scale the precipices of the Wengern Alps with Manfred to penetrate with Faust the defiles of the Brocken—the painlessly accessible turrets of the Matlock High Tor, the guiltlessly traceable Lovers' Walks by the Derwent, have for me still more attractive peril and a dearer witchery. Looking back to my past life I find, though not without surprise, that it owes more to the Via Gellia than to the Via Mala, to the dripping wells of Matlock than to the dust rain of Lauterbrunnen."

Passing down Matlock Dale we have the High Tor on the left, and the wooded slope of Masson on the right. The High Tor rises precipitously from the River Derwent to a height of nearly 400 feet. The same bed of rock is continuous over the Tor, and forms a gigantic anticlinal curve. It is the top bed of the mountain

Photo. by MATLOCK BRIDGE. *Mrs. Potter, Matlock.*

limestone. Before this bed was deposited there occurred an outburst of volcanic matter, which is seen running round under this top bed. It is of a dark colour, and is clothed with trees. It is well seen on entering the tunnel from the Matlock Bath end. The High Tor will repay a climb; the view from the top is very fine. A ledge runs across the face of the cliff below the summit, along which a path has been made that is quite safe. The easiest ascent is from the Matlock Bridge end. Cross the iron bridge in the Dale, pass under the railway, and turn to the right. It may be left by the path at the Matlock Bath end.

Riber Hill lies behind the Matlock Bath Station; the bottom section of the hill, as high as the hamlet of Starkholmes, is Yoredale shale, above Starkholmes it is millstone grit. Riber Castle, that crowns it, was built by the late Mr. Smedley, of hydropathic fame. It is now used as a school.

The Matlock Bath Promenade, which extends from the Midland Hotel to the Public Swimming Baths, was made on the occasion of the Jubilee of our late Queen, 1887. The bridge, erected at the same time, connects it with the Lovers' Walks, that run down about half a mile on the left bank of the river. In addition to the beautiful river-side walk, there are zigzag paths to the top of the cliff. A walk along the edge of the cliff affords very comprehensive views of the river below, as well as the surrounding scenery. The walks are also reached by the Old Ferry at about their middle point, and by a second ferry at the south end.

Leaving the Lovers' Walks by the South Ferry the main road is reached, and in the course of a few yards we come to the Masson Weir, which forms the dam to supply Masson Mill with water. This cotton mill is one of Sir Richard Arkwright's old mills. Until lately one of the

oldest of his spinning jennies was at work in it; it is now in a museum at Oldham. The oldest of Arkwright's mills is about half a mile further down, at Cromford. The whole of these factories, both here and in Marple, are now sold to the English Sewing Cotton Company. Passing the mill and Glenorchy Chapel, on the left bank of the river, we see Willersley, the seat of the Arkwrights, and shortly reach Cromford.

A feature of Matlock Bath are its petrifying wells; the warm water which issues from the springs, at a temperature of 68 degrees Fahrenheit, is highly charged with carbonate of lime in solution. The water is introduced high up in the well, and is let out of the pipe in jets, which splash upon the articles to be petrified, and each drop of water leaves its atom of lime behind it, so that in about a year's time the articles are coated with lime. The articles are coated, not petrified. "The antiquity of the thermal waters is beyond doubt; they were discovered as far back as two centuries ago."

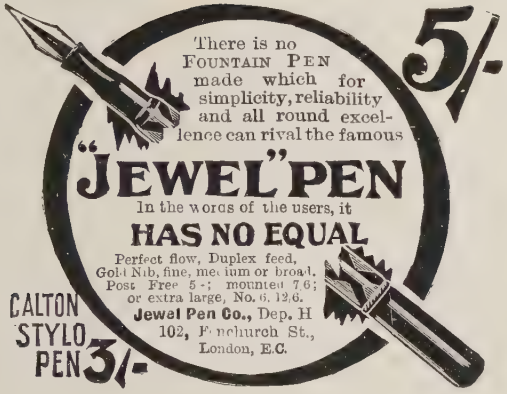
There are numerous caverns in the hills, which are very interesting to the geologist, the chief being—The Rutland, the Cumberland, the Speedwell, and the High Tor Grotto.

The Pavilion Gardens occupy the hillside in the centre of Matlock Bath, behind the Royal Hotel. For the picturesqueness of their site the gardens are unequalled. From the terraces in front of the Pavilion are seen, on the north-west, Masson Hill, 1,111 feet. Jutting out from Masson is a tower-capped spur, the Heights of Abraham. Looking up the valley, Matlock Bank can be seen in the distance, with the High Tor on the right. Riber Hill is directly in front, with the Lovers' Walk Rocks below it, that run down on the right to the Cat Tor Rock, behind which is Willersley. The northern half of the Pavilion

ground is occupied by broken masses, called the Romantic Rocks; these rocks lie upon a bed of clay, that, in reality, is decayed volcanic rock, and are very slowly but surely working their way down the hill. Above the Romantic Rocks on the west are the Dungeon Tors, vast masses of rock that, by slipping on the clay bed, have become detached from the parent hillside, leaving a narrow path behind them. The front of the Pavilion, as high as the first transom, is glazed with plate glass, which enables the scenery to be viewed from the inside without distortion.

If space permitted much might be said of the Heights of Abraham, Harp Edge, the Black Rocks, the Via Gellia, Lea Hurst (the home of Florence Nightingale), and many interesting places, easy of access from Matlock Bath.

Photo. by LYME HALL. *Dr. Nall, of Disley.*



Telephone 428. Tel. Address: "MAY, SHEFFIELD." Established 1870.

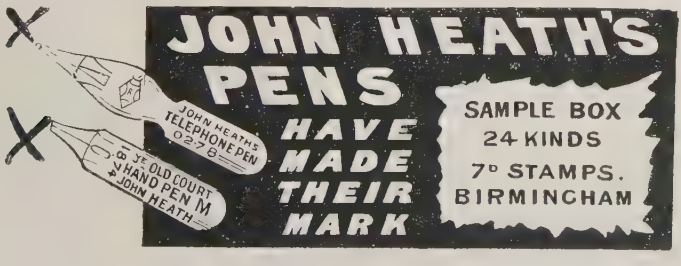
WM. & THOS. MAY, Limited,

TRIUMPH WORKS, SHEFFIELD,

MANUFACTURERS OF ALL KINDS OF

Desks and Furniture for Schools, Churches, Colleges, Technical and Higher Grade Schools, Lecture Halls, Unions, Offices, &c. Also Makers of **FOLDING SLIDING SCREENS (running on ball bearings), for DIVIDING SCHOOLROOMS, MISSION HALLS, &c.**

Priced Catalogue showing 200 different designs of Desks, Furniture, etc., FREE ON APPLICATION.



FROM

Mr. MURRAY'S EDUCATIONAL LIST

THE FACE OF NATURE. Popular Readings in Elementary Science By the Rev. C. T. Ovenden, D.D., Canon of St. Patrick's, Rector of Enniskillen. With numerous Illustrations. Foolscap 8vo, 2s.

[*Just out.*

***A FIRST COURSE OF CHEMISTRY.** By J. H. Leonard, Author of "A First Course of Practical Science." With numerous Diagrams. Foolscap 8vo, 1s. 6d.

". . . Teachers of junior science classes will find it a book worthy of careful examination."—*Glasgow Herald.*

***THE REALM OF NATURE: A Manual of Physiography** By Dr. Hugh Robert Mill, Librarian to the Royal Geographical Society With 19 Coloured Maps and 68 Illustrations. Crown 8vo, 5s.

ELECTRIC WIRING. A Primer for the use of Wiremen and Students. By W. C. Clinton, B Sc. (Lond.), Demonstrator in the Pender Laboratory, University College, London. With 80 Illustrations and a selection of Worked Examples. Foolscap 8vo, 1s 6d. [*Just out.*

"It is written in simple and comprehensive language, free from technicalities, except such as are duly explained in the course of the text . . . the section on jointing being exceptionally good . . . this little work is replete with useful information to those engaged in electrical wiring."—*Electricity.*

***ALGEBRA.** Part I. Adapted to the requirements of the first stage of the Directory of the Board of Education. By E. M. Langley, M.A., Senior Mathematical Master, Modern School, Bedford, and S. R. N. Bradly, M.A., Mathematical Master, Modern School, Bedford. Foolscap 8vo, 1s. 6d.

BRITAIN OVER THE SEA. A Reader for Schools. Compiled and Edited by Elizabeth Lee, Author of "A School History of English Literature," &c. Editor of "Cowper's Task and Minor Poems," &c. With Four Maps. Crown 8vo, 2s. 6d.

Mr. P. A. Barnett (H.M. Inspector of Training Colleges).—"I congratulate you on the production of a very excellent piece of work. I hope the schools will use it; but it is almost too good for them."

HEROES OF THE WEST. A Biographical Sketch of Modern History. By the Rev. A. J. and Mrs. Carlyle and F. S. Marvin, M.A. Two Vols. Vol. I. With Four Illustrations. Foolscap 8vo, 2s.

[*Just out.*

INTRODUCTION TO POETRY. (Poetic Expression, Poetic Truth, the Progress of Poetry.) By Laurie Magnus, M.A. Foolscap 8vo, 2s.

[*Just out.*

". . . from beginning to end it is excellent, and the delightful style, the breadth and incisiveness of view, the sidelights which it opens upon life and thought, and the frequently deep philosophy which is attractively veiled in the Author's persuasive rhetoric, make it at times fascinating."—*School World.*

* *Adopted by the School Board for London.*

JOHN MURRAY, ALBEMARLE STREET, W.

FROM

Mr. MURRAY'S EDUCATIONAL LIST

GEOMETRY. An Elementary Treatise on the Theory and Practice of Euclid. Having in view the New Regulations of the Oxford and Cambridge Locals, the London Matriculation, the Board of Education, and other Examinations. By S. O. ANDREW, M.A., Head Master of Whitgift Grammar School, Croydon. Fcap. 8vo, 2s. [*Just Published.*

COMMERCIAL KNOWLEDGE. A Manual of Business Methods and Transactions By ALGERNON WARREN. Crown 8vo, 2s. 6d.

"The book should be used in every senior class of both our board and private schools, and as an introduction to business life it should prove of great value.—*Statist.*

* **COMMERCIAL FRENCH.** In Two Parts. By W. MANSFIELD POOLE, M.A., Instructor in French to the Channel Squadron, formerly Assistant Master at Merchant Tailors' School, and MICHAEL BECKER Professor at the Ecole Alsacienne, Paris, Author of "L'Allemand Commercial," and "Lectures Pratiques d'Allemand Moderne." With a Map in each Volume. 2s. 6d. each.

". . . a most careful piece of work . . . an excellent book . . . we warmly recommend to all who have to teach Commercial French."—*Educational Times.*

* **FRENCH COMMERCIAL CORRESPONDENCE.** By Professor CHARLES GLAUSER and W. MANSFIELD POOLE, M.A. Instructor in French to the Channel Squadron, formerly Assistant Master at Merchant Tailors' School. Crown 8vo, 4s. 6d. [*Just out.*

"We know of no better work of its kind for the use of advanced students in commercial schools and classes."—*Standard.*

* **INTERMEDIATE FRENCH ACCIDENCE AND OUTLINES OF SYNTAX,** with Historical Notes. By G. H. CLARKE, M.A., of Hymers College, Hull, and L. R. TANQUERELY, B.-ès-L. Crown 8vo, 3s. 6d.

"In short, we like it much, for it is full without confusion, correct without pedantry, and modern without vulgarity."—*Guardian.*

COMMERCIAL GERMAN. In Two Parts. By GUSTAV HEIN, University of Berlin, and Lecturer in German (Honours) to the University of Aberdeen, and MICHEL BECKER, Professor of Modern Languages in the Ecole Alsacienne, Paris. Part I., with a Map. Crown 8vo., 3s. 6d. [*Just out.*

* **A FIRST COURSE OF PRACTICAL SCIENCE,** with full directions for experiments and numerous exercises. By J. H. LEONARD, B.Sc, Lond. With a Preface by the late Dr. GLADSTONE, F.R.S. Foolscap 8vo, 1s. 6d.

"This is an admirable little book. . . . The great point of Mr. Leonard's book is that he writes, as do too few instructors, for the absolutely ignorant pupil, and that unfortunate being is the one too often not considered. In all the experiments he gives the reason why. . . . Such books as the one before us should be scattered broadcast."—*The Lancet.*

* *Adopted by the School Board for London.*

JOHN MURRAY, ALBEMARLE STREET, W.

The Schoolmistress

Weekly—Price ONE PENNY.

CONTAINS
Helpful Articles on all Branches of School Work.

Weekly—Price ONE PENNY.

Teachers *not already Subscribers should order from their Newsagent or forward Postal Order or Halfpenny Stamps to*

HOWARTH BARNES, 149, Fleet Street, London, E.C.

Subscriptions—Prepaid.

ONE SHILLING and NINEPENCE for THREE MONTHS
THREE SHILLINGS & THREEPENCE for SIX ,,
SIX SHILLINGS for TWELVE ,,
Post Free.

The BEST PAPER for PUPIL TEACHERS and all Mistresses.

Telegraphic Address: "SCHOOLMISTRESS," LONDON.

Address:
HOWARTH BARNES,
149, FLEET STREET, LONDON, E.C.

The Schoolmistress

Has the LARGEST CIRCULATION of any Educational Paper.

ALL CLERKS TO SCHOOL MANAGERS

Requiring MALE or FEMALE TEACHERS should

ADVERTISE IN THIS PAPER.

SCALE OF CHARGES:

	£	s.	d.
20 words or under	0	3	0
32 ,, ,, ...	0	4	0
45 ,, ,, ...	0	5	0
64 ,, ,, ...	0	6	0
Every 10 words additional,	0	1	0

LATEST TIME for receiving ADVTS. TUESDAY MORNING.

LYME HALL, DISLEY.

By John L. Lowe.

Lyme Park, the country seat of Lord Newton, has been in the possession of the Leghs of Lyme for many centuries. The hall, which stands at an elevation of 850 feet above sea level, is built in the form of a quadrangle. The principal entrance was designed by John of Padua, who came to England during the reign of Henry VIII. Leoni Italianised the whole of the exterior some three centuries later. He was the architect of Chatsworth, and died in 1746. The house is full of interesting objects. In the entrance hall is a portrait of the Black Prince, which is so arranged that it can be swung outwards and a full view of the entrance hall obtained from the drawing room, which is on the first floor. The idea of the sliding panel, which is mentioned by Sir Walter Scott in "Peveril of the Peak," was obtained by him from the arrangement of this picture, he having visited Lyme prior to writing the book.

Adjoining the drawing room is the "Stag Parlour," so called from a bas-relief in plaster representing a stag hunt from start to finish.

In the saloon and dining room are to be seen some exquisite carvings by Grinling Gibbons, that in the saloon representing the four seasons and music and painting. In the long gallery, which is panelled with oak, is to be seen

the coat of arms of Queen Elizabeth, with the dragon instead of the unicorn, as the supporters used to be before the Union. The chimneypiece in the billiard room is made from the bed of Mary Queen of Scots. On the principal staircase is seen a picture of Joseph Watson, once a keeper at Lyme, who, in the reign of Queen Anne, drove twelve brace of stags from Lyme to Windsor, as a present to the Queen, for a wager of 500 guineas. The wager was between Squire Legh and Sir Roger Mason. Watson lived to be 104 years old, and hunted a buck in his 103rd year. It is said that he drank a gallon of malt liquor every day.

On one of the highest points in the park is Lyme Cage (from which a magnificent view of the plain of Cheshire is to be seen), built in 1524 by Sir Peter Legh, as a keeper's lodge. A secret underground passage used to run from the Cage in Queen Mary's bedroom.

The estate of Lyme (Lyme signifying a border) came into the family of Legh towards the end of the fourteenth century.

The present owner of Lyme Park, Lord Newton, is the second Baron Newton.

Lady Newton (who has kindly consented to receive the "Purses," on the Thursday of Conference week) is a daughter of the late Bromley-Davenport, Esq., of Capesthorne, Cheshire.

Both Lord and Lady Newton take a great interest in education, her Ladyship frequently visiting the schools when in residence at Lyme.

"The Journal of Education:"

A MONTHLY RECORD AND REVIEW.

THIRTY-FOURTH YEAR OF ISSUE.

Price 6d.; per post, 8d. Annual Prepaid Subscription, 7s.

"The Journal of Education" is "The recognised organ of an important profession."—*Glasgow Herald.* "The most competent and best edited paper of its class."—*Athenæum.* "The first among educational papers."—*Pall Mall Gazette.* "'The Journal of Education' continues to occupy the premier position. It has unrivalled facilities for learning what is being transacted behind the scenes, and its columns are open to experts of every shade of opinion."—*Oxford Magazine.* "'The Journal of Education.' This has made its way to the top rank of educational journals Nowhere can we find a more carefully recorded chronicle of events, better considered judgments on questions of the day, or more competent criticism of educational literature."—*Spectator.* REGISTER OF TEACHERS.—"With reference to the Order in Council establishing a Teachers' Registration Council, which was issued in March last, *The Journal of Education* for January makes the first public announcement that teachers have actually been registered under Column B. Specimens are given of entries as they appear on the register, with qualifications, address, &c., attached; and also the names of all headmasters and headmistresses who have been entered up to December 12th. Under Column A there will be some 90,000 entries, and the printed volume or volumes cannot be expected much before the end of the year."—*The Times.*

"The Journal of Education" contains each month, besides Articles by the leading Educationalists: **Occasional Notes, Notes on Technical Education, Reviews and Notices of Books, News from the Universities, Colleges, and Public Schools of Great Britain and Ireland, Reports of Educational Societies, Foreign News, &c., &c.**

"The Journal of Education" is the **Official Medium** of **The Incorporated Assistant Masters' Association, The Teachers' Guild of Great Britain and Ireland,** and **The Association of Teachers in the Secondary Schools of Scotland.**

The Charges for Advertisements are as follows:—

WHOLE PAGE, **£5 10s.**; HALF PAGE, **£3**; QUARTER PAGE, **£1 15s.**

SCHOOL ANNOUNCEMENTS, SCHOLARSHIPS, EXHIBITIONS, ETC.—
Sixpence per line; minimum charge, **Five Shillings.**

POSTS VACANT OR APPOINTMENTS WANTED *(prepaid)*—
Thirty words for **Two Shillings.** **Sixpence** for each additional Ten words.

OFFICES:

3, BROADWAY, LUDGATE HILL, LONDON, E.C.

CHAPMAN & HALL'S
EDUCATIONAL PUBLICATIONS.

A Series of Large Studies for Class Teaching in Schools.

Set I.—PLANT FORMS.

Set II.—NATURAL OBJECTS.
By G. W. RHEAD, R.E. Per Set, 12s. net. Eeach Set contains 6 Outline and 6 Tinted Subjects.

MEMORY DRAWING OF PLANT FORM, AND BLACKBOARD DRAWING.—Twelve Cards of Plant Form to meet the above Syllabuses. By G. W. RHEAD, R.E. Price 2s. 6d. net; postage 3d.

FLORAL STUDIES AND DECORATIVE DESIGN.—By J. WARD In Portfolio, 20s. net. Twelve Sheets.

THE ART OF SHADING.—By W. MANN. Forty Illustrations. Demy 8vo. 3s. net.

WOOD CARVING—By F. G. JACKSON. Large crown 8vo. 3s. net.

PERSPECTIVE FOR ART STUDENTS.—By R. G. HATTON. 208 Illustrations. Large crown 8vo. 5s.

A SYSTEM OF BRUSH DRAWING—By R. S. DOUGLAS and ADA HILL WALKER. 3s. net.

THE YOUNG PEOPLE'S LIBRARY.—Price 3d. each net; in cloth 6d. each.

KING ALFRED. By A. H. WALL. In Three Parts.
PULABAD; or, The Bravery of a Boy. By G. MANVILLE FENN.
CURLY HEAD AND HIS NEIGHBOURS.
CROOKED OAK TREE.
JOHN HAWKE'S FORTUNE. By G. A. HENTY.

PHOTOGRAPHIC REPRESENTATIONS OF CASTS.
Mounted on cards. 2 sets of 12 examples, 8s. per set net.
" " " " on art paper, 3s. per set net.

THE A B C OF DRAWING AND DESIGN.—By F. G. JACKSON. Two Parts, 2s. 6d. net each.

THE NEWARK FREEHAND DRAWING COURSE.—Sixty Freehand Examples in Book, 4s. 6d. net. On cards, 4/6 net.

RENAISSANCE ORNAMENT.—Art School Series. 3 Books; 13 Examples in each, 4d. each. On cards, 8d. per packet.

HARBUTT'S PLASTICINE.—Per lb., 1s. 4d.; postage 4d. per lb.

HARBUTT'S "PLASTIC METHOD." 4s.

PLASTIC METHODS FOR PLASTIC MINDS.—By Mrs. HARBUTT. 1s. net.

PLASTER CASTS.—A complete fully Illustrated Catalogue of over 400 Casts, issued by Chapman & Hall, Limited, including supplementary list of new and important Casts, lately issued, for freehand, light and shade, modelling, drawing from antique, &c., &c. Price 2s. net, postage 3d.

Diagrams, Botanical, Mechanical, Hygiene, Metallurgy, Physiology, Physiography, Mining, &c. Catalogue on application.

11, HENRIETTA STREET, LONDON, W.C.

CAVE EXPLORATION IN DERBYSHIRE.

By Ernest A. Baker, M.A.

During the last two years explorations on a large scale have been carried out in the five great limestone caverns near Castleton, in the Peak of Derbyshire. The object has been partly scientific research and partly the sport to be enjoyed in subterranean adventure, the party of explorers consisting chiefly of rock-climbers, whose special abilities and experience have proved particularly useful in cave work. Several interesting and important discoveries have resulted; and, even where this was not to be looked for, our knowledge of these huge cavities, of their mode of formation, and of the nature of their water system has been increased by careful observation and measurement.

The limestone country south of Castleton, like certain parts of Yorkshire and Somerset, is honey-combed with cavities of all shapes and sizes, most of which are probably still unknown, since of the five greatest caverns three were discovered by miners, and have no natural entrance. Early in the nineties the eminent French speleologist, M. Martel, visited the district hurriedly, and examined these caverns in a cursory fashion, drawing up a series of charts showing roughly both plans and elevations. Much of this

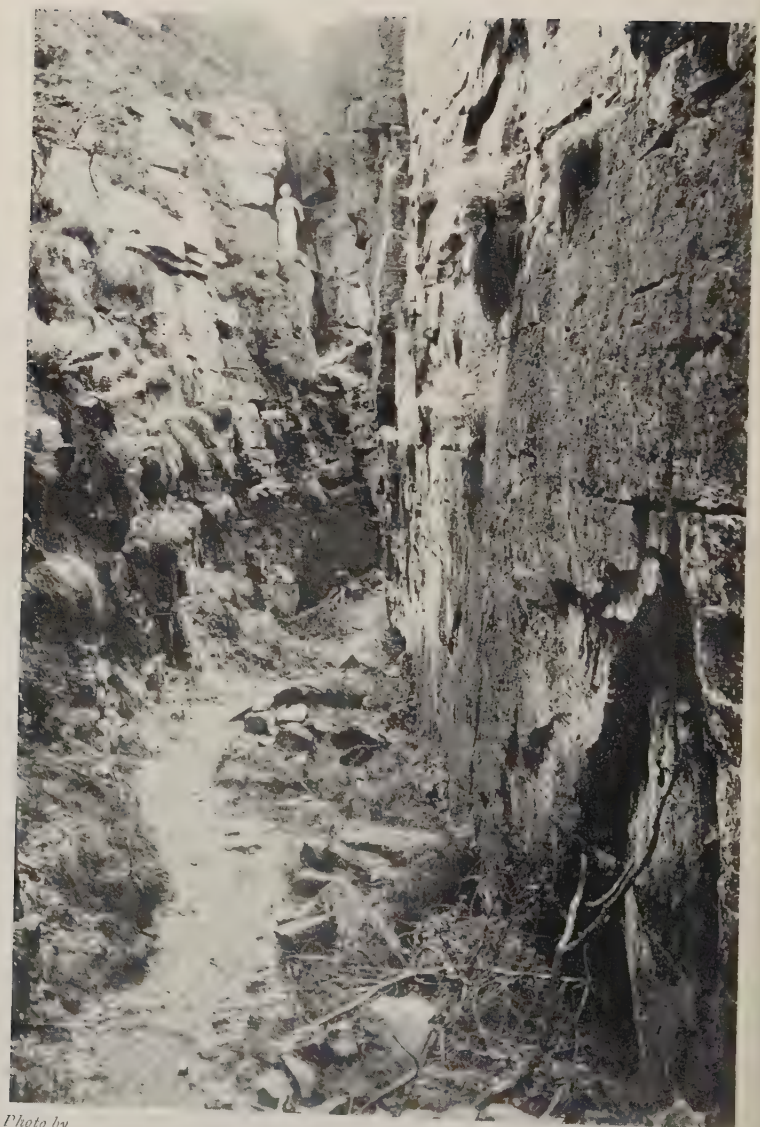


Photo by *Rd. Keene, Limited.*

LUDCHURCH.

was based on conjecture; yet his experience and shrewdness were seldom at fault, and many of his guesses have now been verified, while the charts have been useful as a provisional basis for more extended work. It was in September, 1900, that the exploring party had its first experience of cave work, making a descent into Elden Hole, a waterless fissure 200 feet deep, with an inner cavern 65 feet deeper. This chasm has had local fame as one of the wonders of the Peak ever since Hobbes wrote his De Mirabilibus Pecci, and its bottom seems to have been reached by several adventurers from the time of Elizabeth onwards. Our party of seven was equipped with nothing but ropes, the idea being to get down, if possible, by the simple methods used in rock climbing. The result of the enterprise was a rather disagreeable adventure; a serious disaster was narrowly averted, and the hauling party found it so difficult to get the three men out who had descended that one man actually remained inside the hole nearly nine hours. Taught by their mistakes, the members organised a more scientific exploration a few months later, stretching a heavy cable across the mouth of the hole, with a seat attached to 300 feet of rope running over a trolley. The galleries and chambers that seem to have been accessible in 1770, when John Lloyd, F.R.S., wrote an account that hardly tallies with our observations, were not rediscovered, having, perhaps, been blocked up with débris. The inner chamber, domical in shape, and thickly encrusted with stalagmite, was carefully examined, and an attempt made to measure its height with a balloon. It is about 90 feet high, and, like the hole itself, appears to have been formed by the widening of joints in the limestone, without the agency of running water. No exit was discoverable at the bottom, although local opinion has it that Elden Hole and Peak

Cavern are connected, and that an unfortunate goose that fell down the hole found its way to the surface again through the latter opening.

With the experience thus acquired, the party thought themselves equal to what promised to be a far more serious and dangerous undertaking—an exploration of the so-called "Bottomless Pit" in the Speedwell Mine. This subterranean cavity was broken into in the eighteenth century by a lead-mining company, who had bored a perpendicular shaft not far from Peak Cavern. Subsequently they drove a level, 750 yards long, from near the Winnats Pass, and tapped this chasm of unknown height and depth from the other side, bridging the gap by a causeway built on the precipitous slope. Tourists are nowadays conveyed by boats along this level to see the marvels of the "Bottomless Pit." Our work in this and other caverns was done chiefly at night, so as to avoid such spectators. Beyond the discomfort and slight risk of being let down through a steadily increasing jet of water on to water-swept rocks, the explorers met with no difficulties or dangers. The total depth of the chasm was found to be 85 feet, a pool, 22 feet deep, occupying an area of 27 by 14 yards (a raft was constructed to get the soundings); and no other caves or galleries were discovered. Rockets were sent to a height of 108 feet, but probably fell short by hundreds of feet of the roof of this prodigious chamber. Most interesting were the specimens of the fauna obtained by Dr. Lyster Jameson. These comprised gnats, earthworms, beetles, "springtails," and various crustaceans, all wanderers from outside; a blind mite (probably Gamassus), two flat worms (Planaria Alpina and Polycelia Cornuta), an almost colourless "water-flea," with eyes (Gammarus), all thoroughly naturalized in their subterranean habitat; and, most interesting of all, three blind species that have

probably been isolated in this sunless pool for hundreds of generations, Lipura ambulans, Tomocerus tridentiferus, and Lipura inermis (Tullberg) L. Wrightii (Carpenter) which occurs in the Mitchelstown Cave, Ireland, but had never hitherto been found in any English cave.

The exploration of Peak Cavern, or the Devil's Hole, proved exceedingly interesting. A new entrance was discovered into the interior from Cave Dale, through a nearly vertical rift, 117 feet long, produced by the gradual widening of joints. It is, of course, of no interest except to speleologists, as the man who climbed down it was supported all the way by an Alpine rope. Then a cavity in the roof, near the cave mouth, which had been marked as a shaft or aven on Martel's chart, was climbed by means of a series of ladders wedged across; and a finely-encrusted chamber was revealed, the only part of this cavern where stalactitic deposits of any size or beauty are known. More important discoveries were made beyond the utmost point reached by Martel and other explorers. A collapsible boat was propelled through a watery tunnel, or siphon, as he had described it, the roof of which was so low that the voyagers had to lie flat to avoid accident. Beyond this a cave was discovered with a second tunnel, which narrowed so much that the boat could not get through to the end, and the explorers, laden with the limelight, photographic apparatus, etc., had to wade the rest through several feet of water and mud. A series of vaults and corridors, with a branch leading to a big swallow, was then explored, and one man descended, through torrents of water, to the surface of a deep pool at the bottom. But the most unexpected find was a proof that these forgotten caverns had actually had human visitors at some remote period. It was a wooden sled with iron runners, waterlogged and full of gravel, evidently used for carry-

ing ore. The local histories are replete with information about the mining industries of the past, but no reference can be found as to mining here or as to any knowledge that this series of caves existed. The sled is now lying at the cave mouth, but ought certainly to be placed in the museum of a local town, after expert opinion has been obtained upon its date and origin.

In the series of caverns opened up by the Blue John Mine, also, we penetrated further than any earlier explorers. Martel's conjecture that a certain steep tunnel formed a communication between the upper and the lower series of caves was found to be theoretically correct. Also, a large cave, of complicated structure, that lies below the deepest point shown on his chart, was reached by wriggling through a hole like a rabbit burrow, 70 feet long and 40 feet deep. It had been reached by a daring explorer in 1857, but was not found again for nearly half a century. A watery tunnel and a vertical rift, magnificently adorned with curtains and pendent masses of stalactite, were explored here; and observations were carried out in the upper series of caves. There several members made a dangerous climb of 130 feet up a chasm in the roof, where the finest display of stalactite and stalagmite ever yet seen in the caverns of the Peak was found encrusting the walls of the rift for nearly 100 feet.

The Bagshawe Cavern is not connected, theoretically or actually, with the other four caverns. Its ramifications extend for miles inside a hill overlooking Bradwell Dale, and were discovered through lead mining. The parts shown to visitors have the reputation of excelling all the other caves in their wealth of natural beauty, and passing wonders were said to be concealed in its further recesses. Martel explored an upper series of caves beyond the Dungeon, where the ordinary visitor stops. Below this

Photo by *Rd. Keene, Limited.*

ON THE KINDER STREAM BELOW THE DOWNFALL.

deep chasm a lower series was discovered in 1901; and in the course of several explorations, involving prodigious labour and no small risk, a number of extensive passages and their communications, with the tunnel traversed by the Bradwell river, have since been traced to their end. Two or three caves, exceptionally rich in stalactites, were found in the line of these passages, but as it is necessary to go through a chain of small lakes, and to crawl on one's face through long stretches of rocky clefts, few people are likely to see their beauty.

On one occasion, in the course of the work, two out of a party of four managed to lose themselves in the maze of passages some distance beyond the Dungeon. They had, unfortunately, omitted to provide themselves with a sufficiency of candles, thinking that the two others were about to follow them up. The consequence was within an ace of proving serious. Reduced to their last shred of candle, they got back into the main series of caverns, but were still unable to ascertain their whereabouts, and still less able to find their way through the long succession of tunnels, chambers, and lakelets back to the general rendezvous. It was only when the other pair had returned to the Dungeon, after proceeding more than a mile along the new caves, that they realised, beyond any doubt, what was the state of affairs. All the while the situation was rendered more acute by the warnings of the guide, and of other people whose local knowledge was far superior to that of the explorers, that an inrush of water was to be looked for after the heavy rains. As a matter of fact, such fears were groundless. Nevertheless, the plight of the two missing men and of the searchers was aggravated by these dire anticipations. After a long search, during which a mysterious fall of rocks was heard at a distance, awakening forebodings in the minds of both parties, the

truants were discovered waiting to be rescued, and fully resigned to the prospect of waiting twenty-four hours more if necessary.

There, as in the other caverns, our researches were the means of dispelling an accumulation of myths; but, on the other hand, the stories based on our adventures and discoveries that have appeared in several publications show that myths grow now quite as marvellously and swiftly as in days gone by.

Cave work has its risks, but they are apt to be exaggerated. On the other hand, there is hardly any other sport to be compared with it for trying exertion. To crawl for hundreds of yards, or, perhaps, for miles, on hands and knees, or to wriggle and thrust oneself between a floor of sharp rocks and a depressed roof, with candle in hand and heavy impedimenta slung round one, and all this in an atmosphere that is anything but fresh and exhilarating, is an utmost test of energy and endurance. But the recompense is well worth the trouble. To be "the first that ever burst" into some grand treasure chamber of natural beauty, to reach some secret spot where no human foot has ever trod, is a joy that loses not a whit because we are in the middle of England and not in the centre of Asia or Africa. All the zest of discovery is there. Cave work is an excellent sport, ranking next to mountaineering and rock climbing among those manly games that constantly involve their followers in severe exposure and serious trials of courage. And its practical value as an aid to science is considerable. But next to the grandeur of the subterranean scenery, the great charm of cave exploration is its variety, descents of deep swallows, rock climbs in vertical avens, boating and wading in watery tunnels and siphons. Though Derbyshire comes next to the Lake District as a district for

rough scrambling, a great many, and these among the finest, of its rock climbs are situated underground.

A few words on the local climbs will not be too much out of place here, for our cave explorers are nearly all mountaineers and rock climbers, and, indeed, our first experience of cave work at Eldon Hole was got in the pursuit of new rock climbs, down instead of up. The Derbyshire scrambles are not, of course, distinguished for height; but for the variety and excellence of their technical qualities they have been highly spoken of by the best authorities. At Robin Hood's Stride and Cratcliff Tor, easily accessible from Buxton, there is enough climbing to occupy any reasonable man for a day, and several climbs that are not likely to be conquered at the first attack. Six miles away, in one direction, are the dolomite cliffs of Harborough and Brassington, and equidistant at the third corner of a triangle are the Black Rocks, overlooking Matlock Bath. Both these places offer a graduated series of scrambles, from the very easy to the most dangerous and difficult. Not far away south is that interesting monolith the Alport Stone, with a pair of climbs representing the two extremes; while, northwards, many a good scramble is to be found by following the long line of the edges, from Chatsworth away into Yorkshire. The crowning height of Derbyshire, Kinderscout, abounds with scrambles, and, indeed, to cross this savage fell is quite a mountaineering experience. Anyone, without many days to spare, who wants both climbing and scenery, should make for the Downfall above Hayfield, and he will assuredly be well pleased. Just on the borders of the county, on the Staffordshire Roches, south of Buxton, and at Wharncliffe Crags, just outside Sheffield, there are almost inexhaustible climbing grounds of the nature and scope I have indicated; there are others to be found on

the wedge of Cheshire that comes in between Derbyshire and Yorkshire; there are the Breedon climbs on the Leicester border, and the Hemlock Stone close to Nottingham. Any man who has had a fair amount of training on these open-air climbs will be well qualified to attempt the longer courses on the Welsh, Cumbrian, and Scottish peaks, or to undertake some of the underground scrambles that I have referred to. He will find such a preparation valuable in the extreme.

Photo by

The Cambridge University Press.

BOOKS SUITABLE FOR KING'S SCHOLARSHIP EXAMS., — 1903. —

Shakespeare—As You Like It. With Introduction, Notes, Glossary, and Index, By A. W. VERITY, M.A. Third Edition. 1s. 6d. [*With Press Shakespeare for Schools.*

Kingsley—The Heroes. Edited by ERNEST GARDNER, M.A. With Illustrations. 2s. [*Pitt Press Series.*

Quintus Curtius. A Portion of the History. (ALEXANDER IN INDIA.) By W. E. HEITLAND, M.A., and T. E. RAVEN, B.A. 3s. 6d. [*Pitt Press Series.*

BOOKS SUITABLE FOR PUPIL TEACHERS' EXAMS., — 1903. —

Gray—Ode on the Spring and Elegy in a Country Churchyard. Edited, with Introduction and Notes, by D. C. TOVEY, Fcap. 8vo. 8d.
[*Cambridge Series for Schools and Training Colleges.*

Milton—Paradise Lost. Books III. and IV. (Subject, Book III.) Edited by A. W. VERITY, M.A. 2s. [*Cambridge Milton for Schools.*

THE PITT PRESS MATHEMATICAL SERIES.

Arithmetic for Schools. By C. SMITH, M.A., Master of Sidney Sussex College, Cambridge. With or without Answers. Stereotyped Edition. 3s. 6d. Or in Two Parts:—
Part I.—Chaps. i.-viii. Elementary. With or without Answers. 2s
Part II.—Chaps. ix.-xx. With or without Answers. 2s.

Elementary Algebra. By W. W. ROUSE BALL, M.A. 4s. 6d.

Euclid—Elements of Geometry. Edited by H. M. TAYLOR, M.A., Trinity College, Cambridge. Books I. and II. 1s. 6d.

Suited to the requirements of the New Syllabus of the Cambridge Local Exams.

An Elementary Geometry. By CHARLES GODFREY, M.A., Senior Mathematical Master at Winchester College, and A. W. SIDDONS, M.A., Assistant Master at Harrow School. Crown 8vo. [*In the press.*

Geometrical Drawing. With Notes and Examples. By W. H. BLYTHE, M.A.
Part I.—Plane and Elementary Solid. 2s. 6d.
Part II.—Solid or Descriptive Geometry. 2s.

Geometry for Young Beginners. An Introduction to Theoretical and Practical Geometry. By F. W. SANDERSON, Headmaster of Oundle School. 1s. 4d.

ENGLISH GRAMMAR.

The Elements of English Grammar. By A. S. WEST, M.A., Trinity College, Cambridge. New and Enlarged Edition. Fifty-sixth to Seventieth Thousand. Extra Fcap. 8vo. 2s. 6d.

An English Grammar for Beginners. By A. S. WEST, M.A. Fifty-fifth to Seventy-fifth Thousand. 1s.
Schoolmaster.—"It is a capital little work, which we can heartily recommend."
Educational Review.—"A marvellous shillingsworth."

A Key to the Questions Contained in West's Elements of English Grammar and English Grammar for Beginners. By A. S. WEST, M.A. 3s. 6d. net.

A Short History of the Expansion of the British Empire (1500-1902). By W. H. WOODWARD. Crown 8vo. Second Edition, enlarged, covering the Peace of Pretoria. With 10 Maps. Cloth 4s. Cloth extra, gilt top, 5s.
Athenæum.—"Thoroughly to be recommended."

An Outline History of the British Empire from 1500 to 1870. By W. H. WOODWARD. Based upon the same author's "History of the Expansion of the British Empire." With Maps and Tables. 1s. 6d. net.

COMPLETE EDUCATIONAL LISTS ON APPLICATION.

London: C. J. CLAY & SONS, Cambridge University Press Warehouse, Ave Maria Lane.

Royal Hotel,

TELEGRAMS:
"ROYAL" BUXTON.
TELEPHONE 0495.

BUXTON.

SPECIAL WEEK-END TERMS.

THE LOUNGE.

American Elevator. Electric Light throughout. 50 Bedrooms.
Spacious Public and Private Rooms.
Level with Baths. Near Pavilion Gardens and Golf Links (18 Holes).
Private Grounds.
Table d'Hôte. Separate Tables. Excellent Cuisine.
Illustrated Tariff on application.

Headquarters of the Publishers' Representatives during Conference Week, 1903.

C. TESSIER DUNHAM, Manager (late West Cliff Hotel, Folkestone).

WALKS AND EXCURSIONS IN THE NEIGHBOURHOOD.

By Samuel Hyde, M.D.

Corbar Hill and Crag is a lofty wooded eminence, standing north of the town, and easily reached from the Manchester Road or from Corbar Road. In the wood is an old stone quarry, from which the stone was obtained to build the Crescent. The wood is laid out with winding walks and rustic seats, sheltered and overhung with branching trees. The profusion of rhododendrons, foxgloves, flowering currant trees, ferns, and mosses, together with the cool and shady walks make this a favourite resort for visitors. Following the winding paths to the highest point of the wood, a small field is reached, at the further side of which is the Crag. Crossing this ground and ascending the Crag a fine extensive view of extreme beauty is obtained. The wood and grounds are open to the public.

Lightwood Reservoir is one of the sources of the Buxton water supply, and is situated on Coombs Moss, which lies between Corbar Hill and Black Edge. The walk from the town is either by Corbar Road or Hogshaw Lane.

Ashwood Dale commences at the lower end of Spring Gardens. The road down the Dale leads to Bakewell and Chatsworth. It is traversed all the way by the River

Wye and the Midland Railway. The scenery along the road is of surpassing beauty. Perpendicular rocks rise on either side in endless variety of form and size, some bare and sombre, others clad with ivy, lichens, ferns, shrubs, and wild flowers, and the whole is enriched by a thick undergrowth, from which spring up plantations of firs and other trees.

The Lovers' Leap is a lofty, perpendicular rock forming one of the corners of a beautiful gorge, down which a pure stream of water runs over a rocky bed into the adjoining river. Here ferns and wild flowers grow in the clefts of the rocks in great profusion. A road leads to the summit of the Leap, and there a fine but limited view of the Dale is got.

The Duke's Drive is the road leaving Ashwood Dale to the right, opposite the Electricity Works. It is reached from Higher Buxton by the Dale Road; it goes for nearly a mile along one side of the Sherbrook Dell to Sherbrook, a charming spot where four roads meet, the one to the right—the London Road—leading into Buxton.

Harpur Hill (one and a half miles) is approached by the London Road. When Sherbrook is reached the road to the right leads to it. It has extensive lime quarries and a number of workmen's cottages. From the Parkes Inn the road to the left leads to Brierlow Bar, about three miles from Buxton, on the main London Road, from which the town can be reached. The road to the right leads along the back of Solomon's Temple, by the foot of Axe Edge, Ladmanlow, and Burbage.

Poole's Cavern, a remarkable natural curiosity, is reached by taking the road—Green Lane—leading to it from the end of West Street, below the Cheshire Cheese, or by the Broad Walk and Temple Road. It is one of the chief caverns of the limestone formation, and is rich in

Chee Dale, near Buxton.

stalactites and stalagmites. A pleasant hour can be spent in the cavern and in the interesting museum formed by the late proprietor. The name is derived from a robber outlaw, who is said to have made the cavern his retreat.

Solomon's Temple is a lofty green hill, reached by ascending the footpath starting near the cavern, and passing through the plantation. A beautiful view of Buxton is obtained from it, and the prospect in all directions is truly magnificent. At the back of the plantations are seen the Grin Lime Works and Quarries. The return journey can be made by taking the road by the farmhouse and proceeding through the wood below.

Axe Edge, two miles away, is over 1,800 feet above the sea level. It is an extensive tract of elevated moorland, which commands wide and varied views of the surrounding country. It is reached by Burbage, either ascending it from the Leek Road or from the Macclesfield Road on the way to the Cat and Fiddle. From this hill arise five rivers, viz., the Dove, the Manyfold, the Wye, the Dane, and the Goyt, the three first flowing to the German Ocean, the two latter to the Mersey and the Irish Sea. On the extreme summit is a cairn erected by the ordnance surveyors.

The Cat and Fiddle is a lonely road-side inn, about five miles from Buxton on the main road to Macclesfield. It is much resorted to by tourists on account of the grand moorland scenery and the splendid mountain air. The inn is just beyond the border, in Cheshire, and is the highest public-house in England. Pedestrians can take the old road to the right, after passing Burbage Church, and return by the new road.

Flash (five miles), on the road to Leek, is an old-fashioned village in Staffordshire. It is from this place that the name "flash" coin or note is said to be derived,

on account of its having once been the resort of a gang of coiners.

Ludchurch (nine miles) is reached by the road to the left, after passing through Flash. It is a rugged spot; the scenery is bold, rugged, and impressive, and withal of enchanting beauty. The cave or chasm is reached by passing through a charming valley and up the wooded heights on the left. It is said that some of the Lollards held secret religious services here during the persecutions in the reign of Henry V. The place is called after one of the early preachers of the Reformation, named Walter Lud-auk.

The Roches (seven miles) are some remarkable rocks on the Leek Road. The drive is wild and picturesque.

Leek (twelve miles) is an interesting little town in Staffordshire, engaged in the silk trade. It has a fine old Church, in the tower of which is a specimen of an old "ducking stool." The drive through the moorland scenery is one of rare interest.

Hollinsclough (five miles) is reached by Harpur Hill, crossing the railway behind the village and over the "Friths." The walk is a most interesting one, amidst the choicest scenery of the district, embracing the first portion of the valley of the Dove, flowing between beautiful hills. On reaching Glutton Bridge the return can be made by Brierlow Bar and the London Road or by the Ashbourne line from Hindlow Station.

Longnor (six miles), a small market town with some primitive-looking houses, is reached by a road leading from Hollinsclough for about a mile, or from Hindlow Station by a picturesque walk.

Earl Sterndale is about half a mile distant from Glutton Bridge, and is amidst scenery of a most charming character.

CHELMORTON (five miles) is an old-fashioned village situated in a valley at the foot of Chelmorton Low. On this hill are two large cairns or barrows of stone. The Church dates from A.D. 1111, and is said to stand on higher ground than any other Church in England. The road to it branches off from Brierlow Bar on the London Road, and a return can be made by taking the road to the left at Chelmorton leading into the Bakewell Road.

ASHBOURNE (twenty miles), a small market town, is situated in the beautiful valley of the Dove. It has a large Church of considerable antiquity, which contains many ancient and curious tombs and tablets, amongst them an exquisite white marble monument, erected to the memory of Penelope Boothby. Ashbourne is reached by the London and North-Western new railway line.

ILAM (twenty miles) is a pretty village four miles from Ashbourne, and near the south end of Dovedale. The village and church are of considerable antiquity, and are remarkable for their beauty. The hall is a fine mansion in the Tudor style of architecture. In the village is a beautiful Gothic cross, connected with which is a drinking well, the cross bearing on one of its panels an inscription in memory of Mrs. Watts Russell.

CHEE DALE AND CHEE TOR (five miles).—These are best visited by walking or driving through Ashwood Dale as far as the foot of Topley Pike, then leaving the main road and taking the path to the left, and following its course along the river side to Miller's Dale. About a mile up the path to the right is Deepdale Cavern, where many remains of the animals of prehistoric Britain have been found. The visitor can return by train from Miller's Dale Station, or by the road, a distance of 6¼ miles. No excursion will more amply repay the pedestrian than this. The walk along this portion of the Wye is full of

the grandest and most picturesque scenery. High rocky cliffs, overhanging crags, wild but beautiful foliage, yawning chasms and rushing torrents make up a scene of rare sublimity. At the point of the river, where it is joined by a musical brook, is Chee Tor, a limestone crag, which rises almost perpendicularly from the river to a height of 300 feet. The sight of this towering rock, with its weather-beaten face, here and there indented by deep and gaping fissures, and clothed at various points with ferns and wild flowers, is one of impressive grandeur. And the river, which is here pent up between high walls of rock, rushes on its course in angry and noisy tumult, heightening the soul-inspiring effect.

Miller's Dale (six miles). -The station is an important junction on the Midland Railway. It is a convenient centre from which Chee Tor, Cressbrook Dale, Tideswell, Taddington, and other places can be visited.

Monsal Dale and Cressbrook Dale are two of the finest dales in Derbyshire. Nothing could exceed in quiet loveliness the scenes here presented. The effects produced by hill and dale, and rock and river, together with the richness of the wild vegetation, are of the most pleasing character. No visitor should miss this excursion. It can easily be made by train to Miller's Dale, and walking then to Cressbrook, and then to Monsal Dale, from which place one can return by train to Buxton.

Tideswell (eight miles) is a small old town, 2½ miles from Miller's Dale Station. Its Church has been styled the "Cathedral of the Peak" on account of its large proportions and rich architecture.

Taddington (six miles) is on the road to Chatsworth. Its interesting old Church and quaint cottages compose an idyllic picture for the landscape painter.

Ashford (ten miles) is on the road to Chatsworth. It

Topley Pike, near Buxton.

has works, where the black marble, obtained from neighbouring quarries, is cut and polished.

Bakewell (twelve miles) is a small market town of great antiquity. Its position and surroundings are of peculiar interest and beauty. The Church is full of historic interest, and contains many ancient tombs and brasses, including the tombs of the Vernon and Manners families.

Haddon Hall, the property of the Duke of Rutland, two miles beyond Bakewell, is one of the finest old baronial residences now left in England. It is in an excellent state of preservation, and its position, surrounded by a grand old park, through which the River Wye runs, is exceedingly fine. The ancient kitchen, the banqueting hall, the chapel, the ballroom, and the portions most closely connected with the romantic story of Dorothy Vernon, daughter of the "King of the Peak," who conveyed Haddon to the Manners family, are of great interest to visitors.

Chatsworth, justly styled "The Palace of the Peak," is the princely seat of the Duke of Devonshire. The fame of the beauties and attractions of this magnificent house and park has spread wherever the English language is spoken. The principal objects to be seen are the park, with its tall ancestral trees, the gardens, the conservatory, and the fountains; the interior of the house, with its invaluable treasures of art, the state rooms, the library, the chapel, the orangery, and the statuary. The pedestrian can reach it by going through the wood behind Bakewell Station, taking the path to the left at the top of the wood, into the Edensor Road, and then turning to the right. It is about three miles to Chatsworth.

Edensor is "the model village" just outside the park. Its churchyard is mainly interesting as the plain and unpretentious burial place of the Cavendishes.

Eyam (twelve miles) is a pretty village, beautiful for situation, and memorable on account of its desolation by the plague of 1665.

Darley Dale (seventeen miles) has scenery beautiful in the extreme. The Church is quaint, and contains a famous old yew, said to measure 33 feet round the stem, and to be many centuries old.

Castleton (twelve miles) is interesting from its caverns—Peak Cavern, the Blue John, and the Speedwell Mines—and has been rendered classical by the pen of Sir Walter Scott, in "Peveril of the Peak." Peveril Castle is an interesting ruin of great antiquity.

Errwood (four miles by foot, eight miles by carriage road) is the seat of the late Mr. Grimshaw. The pedestrian can visit it by taking the steep road to the left on the top of the Long Hill, on the Manchester Road, down into the valley of the Goyt. The return can be made by following the path by the river to the Old Cat and Fiddle Road, and on through Burbage to Buxton. This is one of the most delightful excursions in the district. The scenery by the river is pretty in the extreme, and the grand show of rhododendrons in Errwood Valley in the early summer is equal to anything of the kind to be seen in this country.

Whaley Bridge (eight miles) is a small town on the road to Manchester. The drive there or the walk back by the River Goyt, after proceeding there by train, affords a constant change of scenery.

Chapel-en-le-Frith (six miles) is an ancient little town situated in a valley of great beauty. The nearest road is by Fairfield and Doveholes.

Disley (thirteen miles) is a pretty village on the Manchester Road. Close by is Lyme Hall, with its grand old park, the seat of Lord Newton, whose family have possessed it for nearly 600 years.

The WALTER SCOTT PUBLISHING CO. Ltd.,

LONDON and NEWCASTLE-ON-TYNE.

Crown 8vo, Cloth, **3/6.**

Musicians' Wit, Humour, and Anecdote.

By FREDERICK J. CROWEST.
Author of "The Great Tone Poets," "The Story of British Music."
Profusely Illustrated with Quaint Drawings, by J. P. DONNE.

MUSIC STORY SERIES.

Square Crown 8vo, Cloth, **3/6 net.**
Illustrated with Photogravure and Collotype Portraits, Half-tone and Line Pictures, Facsimiles, etc.

FIRST VOLUME:
THE STORY OF ORATORIO. By ANNIE W. PATTERSON, B.A., Mus. Doc.

Apply to Publishers for Prospectus.

MAKERS OF BRITISH ART.

Square Crown 8vo, **3/6.**
Illustrated with 20 Half-tone Reproductions and Photogravure Portrait.

Landseer, Sir Edwin. By J. A. MANSON.
Reynolds, Sir Joshua. By ELSA D'ESTERRE-KEELING.
Turner, J. W. M. By ROBERT CHIGNELL, Author of "The Life and Paintings of Vicat Cole, R.A."
Romney, George. By SIR HERBERT MAXWELL, Bart., F.R.S., M.P.

The WALTER SCOTT PUBLISHING CO. Ltd.

Undertake the Printing and Publishing of all kinds of Books, Pamphlets, and MSS. for Authors. Estimates given for this and all general printing, large or small.

The WALTER SCOTT PUBLISHING CO. Ltd.,

Paternoster Square, London, E.C.,
And Felling, Newcastle-on-Tyne.

HARBUTT'S
PLASTICINE.

CLEAN, ANTISEPTIC, EVER PLASTIC, ECONOMICAL in use, and is Unaffected by Heat, Cold, or Water.

SCHOOL MODELLING REVOLUTIONISED!

By the Use of PLASTICINE.

Enlarging the scope and simplifying the procedure of Modelling in the ordinary Class Room, without the great waste of time spent in the preparation of clay, with its attendant troubles and disadvantages.

FOR CLASS DEMONSTRATIONS AND EXPERIMENTAL PURPOSES, AND ESPECIALLY FOR TEACHING GEOGRAPHY AND THE INFANT CLASSES, IT IS INVALUABLE.

There are worthless imitations of Harbutt's Plasticine now on the market. Beware of them! They are of the nature of common soaps, dissolve easily in water, and some are positively dangerous from the corrosive effect of caustic soda and other chemicals they contain. My boxes all bear my name.

SEE THAT "HARBUTT'S PLASTICINE" IS ON THE BOX.

Samples of Plasticine in Four Colors, with instructions how to make a Geographical Model and all particulars, will be sent with pleasure on receipt of your application.

From all SCHOOL FURNISHERS or direct from

WM. HARBUTT, A.R.C.A., Lond. **Plasticine Works and Studio, BATHAMPTON, Nr. BATH.**

CYCLING NEAR BUXTON.

By Haydon Perry.

AMONG THE HILLS.

One Bank Holiday "week end" I was determined, in spite of drenching rain, to go to some lonely spot untroubled by the ordinary tourist, and having spent some time with a party of enthusiastic cyclists on the Friday night, my ardour ran so high and my scorn of mere weather became so extreme, that I felt as if nothing short of a Bengalese cyclone could alter my purpose of starting on Saturday. It often happens that those who leave Manchester in bad weather are well repaid for the hazard, and so it ultimately proved on this occasion.

My destination was Ludchurch, a pretty spot, but very little known, being on the extreme northern border of Staffordshire. Sheltered by thick plantations, it lies in the hollow of the hillslopes at a point where two valleys meet. Along the larger of these the Dane goes babbling down in its last effort to escape from its cradle in the hills ere it sets forth upon its journey across the Cheshire plain. The cleft cut out of the moorland, which is Ludchurch, is said to have been a retreat of the Luddites, and that fact is recorded in its name; but of this there seems to be insufficient evidence. At any rate, the place is charmingly secluded. From the north it can only be reached by a footbridge over one of the Dane's feeders, and it becomes necessary to leave the machine at Gradbach, a neighbouring hamlet, and travel the last mile on foot.

Tor, Miller's Dale

On the way to Ludchurch I had one of the finest mountain rides I can remember. The first stage of the journey was to Buxton, and most riders are, I hope, familiar with it. By dodging to the right of Stockport all that is unpleasant in the run may be avoided, and every one who is in good enough condition to face the collar work of the last half of it, will drop down into Buxton fresh and fit. I, unfortunately, had rain nearly all the way, and although the cloud forms on Combs Edge were magnificent beyond description, the whole landscape was too hopelessly overcast to tempt further exploration among the heights. There was nothing for it but to come to anchor at Buxton and wait for fair weather. There is no need to argue the advantage of having a change ready under such circumstances. Some constitutions seem proof against the discomforts and dangers of a drenching, but the great majority cannot afford to run the risk. Plenty of dry woollen things should be carried or else sent on in advance. There is plenty to interest one in Buxton, and even in the worst of weather quite extensive walks may be taken on its long covered promenades. The town would be the natural base of the walking tourist intent on Ludchurch. He could return the way he came, but it would be far better for him to go on by Dane Bridge and strike the North Staffordshire line at Rushton Spencer Station —in either case a walk of twelve or fourteen miles. He should inquire at Gradbach, where a pass to entitle him to cross the moors can be obtained. The distance to Ludchurch by the cycle route will be about thirty-one miles.

The morning was gloriously bright, and I was on the road before the town was fairly awake. My way lay first by the coach road to Macclesfield, but at Burbage, a sort of suburb of Buxton, the left-hand branch had to be taken

in the direction of Leek. The gradient is a rising one, but does not, I think, offer so heavy a climb as that to the Cat and Fiddle. The road skirts the works of the old Buxton Lime Company, the products of which are famed in the chemical districts of the lower Mersey valley. It seems scarcely credible that the enormous mound of *débris* near the quarries could have been piled there by human agency. Yet this is obviously the case. Having rounded the quarry, we lose sight of the town of Buxton. The road rises more abruptly, branching to the left, where a row of five cottages looks down the hill. Near a place called Grin it intersects a single line of railway by a level crossing. A danger board, which, I believe, once stood higher up, to warn cyclists who are descending the declivity, should be at once replaced.

At the end of the steepest rise we have an extensive and irregular valley open on the left and in front, for we are now skirting Axe Edge, which rises in grand proportions on the right. Looking east, where a tall chimney stands at the end of a quarry, we see the village of Harper Hill. The cleft beyond it is the valley of the Wye, with the cliffs surrounding Chee Dale in the distance. To the north-east, beyond Grin and past the cloud of thin haze that tells us Buxton is hidden in the intervening hollow, lies distant Edale. As we rise ranges of hills farther and farther off come into view, and the grey point of Croome appears conspicuous among them. Near the fourth mile, when the climb is over and the descent begun, note a long white house on the right. The locality is called Patch Head. Opposite the house, and some distance from the road, is a well, known as Dove Head. From it the waters of the Dove first trickle out of the hillside. Do not mistake for the Dove a small stream which an elbow of the road passes over at the third milestone. This is but

a feeder. The steep track which comes down from the Edge quite near it is an old road from a colliery.

At Dove Head we pass the invisible boundary of Staffordshire. The next mile is an easy run down, unless the wind, pent for a moment behind Hawk's Ness, rushes furiously round the bend to meet you. Just after passing the Travellers' Rest—an inn without a sign, but easy to identify, since it exactly faces us where the road bends at right angles—we take the right-hand road for Flash. There is still the fair expanse of low hills in the direction of Longnor, Sheen, and Hartington, while the range of Morridge bounds the southern view. At Flash I shall give a piece of advice for which the tourist will afterwards be thankful. There are two ways down to Gradbach. One is a carriage road—of a kind. It is down hill almost all the way, of fairly uniform gradient, and, although sandy and stony, can easily be ridden. The other is not very much more than half the distance, consequently almost twice as steep, and of a surface so rocky that it must be pronounced impossible for cycling. Leave your machine at Flash and go by this latter.

It is true that the views on the carriage road are towards the end very fine, but they cannot be compared for magnificence with those seen from the short, steep road; so that to walk the last three miles to Ludchurch is by far the more enjoyable plan. The lane soon becomes lonely after leaving the village. We miss the pretty fawn-coloured birds which the natives call stone-smatches, and which for the past mile or two have been flitting along with us behind the low wall by the roadside, and perching frequently upon it, as if moved by a sort of shy curiosity to know our business. The vegetation at this height is scanty, and the few sheep on the mountains scatter wide to find any pasture that is plentiful. But we can here and

there descry the delicate bloom of the heather, and what Linnæus called the northern fern grows well. As we descend, the landscape opens grandly. Looking to the right, in the direction of Birchen Booth, where, by the way, the boundaries of three counties meet, we see the summit of Shining Tor—one of the highest, but not quite the highest, of the hills of Cheshire. Close by, the frowning brow of Shutlings Low rises prominently above the rest, and farther to the left, the steep scarp of Cloud End and the long range that culminates in Mow Cop.

Presently, in a hollow to the right, nestling where no winds can reach it, but so placed that the sun can pour upon it all day, appears a small farmstead. Its garden gives us the first touch of bright colour we have seen for many a mile, and there are larger trees close by than can be found anywhere else on the slopes of Axe Edge. The harebell luxuriates in this hollow, and even the foxglove flourishes. Presently we join the carriage road, and soon afterwards a lovely bit of water scenery reveals itself. Two mountain streams, one on each side of us, join close to a bridge over one of them, and then go tumbling down together over a series of the prettiest cascades. Anon these join the Dane hard by the footbridge mentioned above. Without crossing the latter river, we leave the road and traverse a field path that runs beside us. The footbridge passed, a short walk by a rough uphill path through woodland will bring us to our destination of Ludchurch, at the bottom of an irregular and broken ravine, the entrance to which is half hidden in wild heather-clad moorland. The pedestrian's route on by Dane Bridge lies across this moorland, and affords magnificent prospects of Shutlings Low and the surrounding hill scenery.

OVER THE SNOW.

In hard frosty weather, with little or no snow, the cycle is superior to any other means of locomotion on the road. Nor would I be deterred from riding by symptoms of thaw in or near the town. A wire to some friendly innkeeper some dozen miles away will often bring the reassuring news that the frost still holds in the open country.

One day in the winter I determined to try a journey over frozen roads, and not having had a really fine mountain ride for three months, I caught at the happy suggestion of a climb among the snowy heights of North-West Derbyshire. As I had no idea of the state in which I should find things at a height of some 1,300 feet above Manchester, I took the precaution of including a flask of spirits in my very simple kit. For I was bound for Buxton; and as I knew that the last seven miles of the way was destitute of any wayside accommodation, I thought it well to be forearmed against the worst difficulties of snowdrift and blizzard that were likely to be encountered on the bleak "divide" that walls off the Goyt from the Buxton basin. The ride turned out to be a very vigorous one in places, but enjoyable from first to last, and the flask came home unopened.

The morning was far from clear in town, but the low temperature and gentle northerly breeze were not unpromising; and as one cleared the suburbs and got south of Stockport the patches of blue sky were more frequent, and formed a lovely background to the delicate wisps of white feathery cloud that partly hid them. The sweet hum of the chain in the gear-case had, in places where the snow lay thin and crisp, a pleasant crackling accompaniment from the tread of the tyre, very much like the sound the Norwegians call *Knirken*. And so away along the

Photo. by

GOYT'S BRIDGE

gradual rise to the region of the avenues that herald the proximity of Disley, with its fine old hostelry on the right.

Further on the snow is a little deeper, but it is still only a mere sprinkling, and we climb without much difficulty to Whaley Bridge. I saw some toy sledges in use at Whaley Bridge. Crossing the Goyt, the Derbyshire portion of the journey begins, and after admiring the ivy-grown containing walls of the river, we start upon a practically unbroken ascent of five and a quarter miles. The lower road to the right, going under the railway and then rising at first rather steeply, is the one to take. It gives extensive views over the broad Goyt valley, the distant sky-line being broken by the soft fringe formed of the sprays and twigs of dense plantations.

The road is good. At the eighteenth mile from Manchester I took a snow measurement, and found it to be exactly half an inch. Where this was at all beaten down by traffic riding was not greatly retarded. My machine had 30-inch wheels and large roadster tyres. I believe that large tyres and wheels surmount a continuous obstacle like snow with greater ease. The river on the right is at this point very near the road, and a series of pretty weirs add greatly to the charm of the valley landscape. Then, as the road winds pleasantly to the left, the view is shut in by thick woods of firs or of bare trees. Ivy clothes the trunks of some of them. To others one golden branch of unfallen leaves is sometimes left. Here and there the holly bush that must have passed quite unobserved in the glory of summer foliage stands out brilliantly amid the colourless trunks and limbs that surround it, although the eye may search in vain for traces of the scarlet berries. Perhaps the birds have already found whatever fruit they bore. Although I did not see one winged creature above Whaley Bridge, there was ample

evidence of their recent presence. The snow on the road showed innumerable traces of their feet. Sometimes the recurrence of many pairs of impressions showed that the bird had hopped. In other cases he must have had habits more like those of the *cursores*, for the marks were connected by long trails like those characteristic of the imprisoned footprints found in the mud-slabs of the Bay of Fundy, and making a pattern suggestive of the form assumed by running ground plants like the strawberry.

The birds may all have left the mountains in search of more plentiful food. The dark large-horned sheep on the upland slopes were feeling the scarcity, too, and were scratching the ground to uncover the sparse herbage. At the twenty-first mile I took another snow measurement, and found it three-quarters of an inch. Riding had been much harder from the point where the private road to Fernilee had been given off, for the bulk of the recent traffic from Whaley Bridge seemed to have been in the direction of the Hall, and higher up the snow was hardly beaten down at all. On no account take the way across a deep valley straight ahead followed by the telegraph wires, but keep to the higher road, making a long elbow to the north-east. This takes us round near the head of the streamlet, giving in one direction a peep at a tiny cascade which has built for itself a marvellous grotto of icicles, and in the other a grand prospect towards the now distant Goyt.

Near the summit (twenty-two miles from Manchester) I found the deepest snow. It measured an inch and a third. At the summit itself were great frozen drifts of fantastic shape. The wind that had piled them up had covered the northern side of every post and tree-trunk with a white line, as if everything were touched with brilliant moonlight. The descent was rapid and easy, for there were

traces of much traffic having come in by the road from Goyt's Bridge, and the snow was considerably beaten down. All the same, I would not at this season ride the last hill marked by a danger-board, although at most times one can do so with proper care. The steep part of it from the bend into the Manchester Road was then the most popular toboggan slide round Buxton; and tobogganing, grand sport as it is, is so dangerous that it should have all the ground to itself. During the walk down one could dwell upon the dark dove-coloured clouds that rested on the rose-red of the horizon, separating it from the intense blue overhead, and could wonder at the strange lake of thin green mist, ending in a level half-way up the hills, through which the white architecture of Buxton could be dimly seen.

A DERBYSHIRE HILL RIDE.

A run with a wonderful amount of variety in it may be taken from the little town of Whaley Bridge, on the Derbyshire border, ending at Macclesfield. The road marked on most maps, and coloured on those in which colour is used, indicating the shortest and most direct route, will not in this instance be found the most profitable to travel by. It will be preferable to keep a south-easterly direction as far as Buxton, the capital of the Peak District, thence crossing the West Derbyshire highlands, and finally descending upon the old silk manufacturing town from the eastward.

Inhospitable Highlands.

The stream that tumbles through Whaley Bridge is the rock-cradled Goyt. After a glance at its ivy-grown con-

taining walls, we part company with it for a time, and begin what is practically an unbroken ascent of five and a quarter miles. The road to take is the one going to the right as we look in the direction of Buxton, and which, after passing the railway, begins to ascend, at the outset rather steeply. It commands fine vistas of the valley of the Goyt, the farther boundary of the basin being of high hills adorned with green plantation. Then the road approaches the river again, and we see the water falling over a succession of pretty weirs, with a pleasant singing sound. But this is only for a space, and fir plantations intervene as the way winds gently to the left. The tree boles are not infrequently half-covered with ivy, and the bright green of the newer leaves stands out in spirited contrast to the quieter colours of a Derbyshire landscape, with its grey stone walls instead of hedges and its scanty vegetation. A hardy breed of drab-coloured sheep, with huge horns, eke out a precarious subsistence upon the sparse herbage of these wild uplands.

The Old Way and the New.

Very soon a private road goes off to the right in the direction of Fernilee, but ours continues to seek a higher level. The Ordnance data for Whaley Bridge gives its altitude as 575 feet above sea level, and Fernilee is only 230 feet higher; our road in three short miles must surmount the 1,000 feet plane, and even then we shall not have done much more than one-half of our climbing. The engineers have managed to overcome with considerable success the difficulties presented by the gradient. Their route is a comparatively modern one, and the glimpses we get of the old road of our ancestors, which here and there comes in sight, plunging wildly across breakneck

ravines, are sufficient to show how great have been the advances in this particular branch of engineering science since that appalling track was abandoned.

The Torrent's Course.

No one would think of taking the direct way traversing the deep valley which we soon see straight ahead; but that was once the only route available for the traveller who journeyed in this difficult region. The telegraph wires go by it now—but that is another story. The modern road avoids this valley, and the rocky steeps of the mountain torrent that roars along its base. We double to the north-east, making a long, irregular elbow, and bridging the stream nearer its head waters, as it comes laughing down the steep slopes of Combs Edge. If we now look down the valley which forms its course, past the intersection of the old abandoned road, and let the eye sweep over the wider distance, we can take in a fine expanse of the wild vale of Goyt.

The Confines of the Peak.

At the beginning of our elbow of road our altitude was 1,200 feet; at the end of it, when we meet the old road again and reach the summit, we are at an elevation of 1,400 feet. The descent begins immediately. For those provided with proper brake power it is fast and easy, but the brakeless rider will lose the enjoyment of the last bit of it, which is dangerously steep, and terminates in the heart of Buxton. A danger-board forewarns the approaching tourist. The town of Buxton, which has been described as a miniature Bath, lies exactly 1,000 feet above the level of the sea. One of its handsomest and most characteristic features is the Crescent. Passing along this, we keep in

a southerly direction until the outskirts of the town have been left behind, rising along the finely-engineered highway that makes for Macclesfield, and climbing with it, at times up a very steep gradient, until the Derbyshire county border has been passed. The level rises about 700 feet in three miles, or, roughly speaking, nearly 1 in 20.

Wild Mountains.

The surroundings are grand nearly all the way. After the rider has passed through Burbage and under the High Peak railway line, the view begins to open out, and on the one hand he has the great back of Axe Edge, and on the other Landman's Low. The foreground in all directions is bleak and barren. There is sometimes scant scrubby herbage, upon which, however, big, shaggy, unkempt sheep appear to thrive; but their numbers are very limited, and for the greater part of the journey the surrounding landscape is a lifeless solitude marked by frequent out-croppings of grey inhospitable stone. Here and there may be seen the abandoned workings of a quarry, and then a waste of ragged moor with dark peaty clefts in it, and pools of black water at the bottom of them. As the elevation increases a chaotic confusion of mountain summits and ridges opens north and south—on the one hand, Black Edge and the heights of Goyts Moss; on the other, the wild and rugged uplands of the Roaches.

The Highest House.

When the climb is over, there is a short sketch of approximately level ground, and on the right is seen the sign of the "Cat and Fiddle." It is carved in stone over the doorway of the inn, and concerning it there is a local tradition, the humour of which is too transparent to

deceive even children who have reached their teens. Of the stone cat it is said that on each New Year's Eve, the moment she hears the bells ring the old year out, she forthwith executes a few bars on the instrument of her choice. This is one of the houses of which it is claimed that it is the highest situated licensed house in the land. It is singular how long a misapprehension upon such a point as this will linger when once a false assertion has been made. Nothing is easier than to compare the actual heights of two rival points by reference to Ordnance data. I am not going to say that the "Cat" is the actual highest of all claimants, for there may possibly be claimants of which I have not heard. But as compared with the "Traveller's Rest," on the summit of Kirkstone Pass, this inn enjoys an easy supremacy. The "Traveller's Rest" is less than 1,500 feet above sea level. The inn at Flash, in Derbyshire, stands 1,525 feet high, while the "Cat and Fiddle" overtops them both with an altitude of 1,690 feet.

A Grand Descent.

The descent from the "Cat" is one of the most remarkable in the whole of the North of England. For nearly eight miles the road seeks an almost continuously lower level, there being but one place where for a brief stretch it gently ascends. In order to keep its consistent fall it is truly admirably engineered. It sweeps round long elbows of valley and avails itself of each opportunity to glide along a friendly "hog-back" that may offer a sort of rude natural bridge between one mountain shoulder and another. All this winding about gives an ever-changing panorama of bare and impressive hill scenery, entirely Derbyshire in character, although it is technically Cheshire ground that we are traversing.

And so we drop into the town of Macclesfield, after one of the most exhilarating bits of coasting to be found in England.

Synopsis:—

PLACES.	MILES.	HOTELS.
Whaley Bridge...	0 ...	"Railway," "White Hart."
Buxton	7 ...	"Railway."
,, ...	11 ...	"Cat and Fiddle."
Macclesfield.....	19 ...	"Angel."

John Heywood, Excelsior Printing and Bookbinding Works, Manchester.

BUXTON.

Haddon Hall Hydro.

SPLENDID SITUATION.

ELECTRIC LIGHT THROUGHOUT. *PASSENGER LIFT.*

Table d'Hote—separate tables. **Billiards.**

BALL ROOM. *Own Farm Produce.*

HYDRO OMNIBUS.

Massage—Electric, Nauheim and Hydropathic Baths.

Terms Moderate. **Telephone No. 4.**

Mrs. G. E. HALL, *Proprietress.*

FLEETWOOD'S

Restaurant

AND

Tea Rooms,

25, SPRING GARDENS,

The only first-class Restaurant in Buxton where you can obtain SOUPS, FISH, ENTRÉES, JOINTS, SWEETS, &c., À LA CARTE, at any hour of the day.

FLEETWOOD & Co., COOKS & CONFECTIONERS,

Sole Makers of the Celebrated BUXTON "ZWIEBACK" BREAD.
Recommended by the Faculty **for Gout, Rheumatism and Dyspepsia.**
Sold in Cobs, **1/- per doz.** Post Free, **1/6**; or **2/9** for **2 doz.**

FLEETWOOD'S "Conference" Cakes, 1/6, the most agreeable Souvenir of Buxton

DO NOT

BUY . .

BOOKS .

FOR . .

PRIZES

Until you have seen our School Catalogue. We can save you 25 per cent., and give you a better selection than any other Firm.

* * *

150,000

PRIZES IN STOCK.

* * *

We guarantee the Best Selection at the Lowest Prices with prompt despatch, and invite comparison.

SAMPLES CARRIAGE PAID.

J. Askew & Son,

Lancashire Book Stores,

PRESTON.

Write for Specimens.

CORMACK'S HISTORY READERS

FOR OLDER SCHOLARS.

Cormack's Elementary History Reader, for Standards III. and IV. With 80 high-class Illustrations and Maps, and a Summary of the principal events in the history of the British Empire, from the earliest ages to 1901. 190 pp. 1s 3d.

Cormack's Advanced History Reader, for Standards V., VI., and VII. With 46 high-class Illustrations and Maps, and an extremely useful **Biographical Appendix,** which includes the principal events in the lives of 123 persons (exclusive of Monarchs) famous in British history. 288 pp. 1s. 6d.

H.M. Inspector of Schools, writes:—"It (Advanced Book) is clear alike in print and arrangement, and, so far as I have been able to examine it, seems to me to be a judicious mean between the talky talky which tells little and the uninteresting detail which tells too much."

Scotsman:—"These are School Books of a conspicuously high order. They are well written. The narrative is always fresh, concise, simple, and admirably clear. A feature of each is the manner in which the more recent events are dealt with, the essential points of what is going on in our Colonies, Egypt, the Soudan, China, South Africa, and elsewhere, being stated in a simple and comprehensive manner."

Educational News:—"'Cormack's Advanced History Reader' gives a graphic narrative of the history of Britain and the expansion of the British Empire. It has evidently been written by one well accustomed to the task of guiding and developing the interest of youthful students in this attractive and important subject. The letterpress is excellent, whilst the illustrations are of an extremely high-class character, and reflect great credit on the publisher. 'Cormack's Elementary History Reader' is a literary and pictorial record of the great events in British History. It is written in the simple, attractive style that delights children, and which excites and sustains an enthusiastic interest in their study of the subject."

Cormack's COMPLETE GEOGRAPHY

MATHEMATICAL, PHYSICAL, POLITICAL, COMMERCIAL, With 80 Maps & Diagrams. 1s.

SPECIALLY PREPARED FOR OLDER SCHOLARS.

Under the New Code the special advantages of a single text-book in Geography for all the higher standards are obvious. With a single text-book there is neither overlapping nor omission of work, nor change in the pupil's point of view at his entrance into each successive class. At the same time, while he is specially studying any section of the book, he is steadily acquiring without conscious effort a gradually increasing knowledge of the world as a whole, and of the due proportions of its various divisions.

Headmaster, Upper Wortley Board School, Leeds:—"It is comprehensively and intelligently got up. The Maps and Diagrams are very clear."

Headmaster, Camden Street School, Glasgow:—"I have eleven classes using your Geography."

Headmaster, Raynham Road School, Edmonton, Middlesex (2,300 on Roll):—"Your book is the cheapest Shilling Geography I know, and a capital text-book for the higher standards. The Relief Maps are a grand feature, and England's commerce with all parts of the world is strongly brought out. The chapter, 'A Key to Commercial Geography,' is a very suggestive one: indeed, suggestiveness is a feature of the book. The matter is thoroughly up-to-date."

JOHN CORMACK, 8, North Bank St., EDINBURGH

NORTH OF ENGLAND

School Furnishing Co., Ltd.,

MANUFACTURERS OF

Fittings for . . .

TECHNICAL COLLEGES, . .
LIBRARIES, ...
SECONDARY SCHOOLS, &c.

SPECIALISTS IN CHEMICAL AND PHYSICAL LABORATORY FITTING.

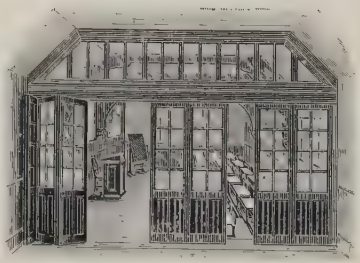
Schemes and Estimates Submitted Free.

Contractors to H.M. Government, London, Birmingham, and other School Boards.

SOLE MAKERS:—

Wilks' Patent Climax Sliding Partition.

Adopted by the Leading Architects.



Cheap, Simple, Effective.

See Model at Stand.

Addresses:

DARLINGTON, NEWCASTLE, SUNDERLAND, MIDDLESBROUGH, and NORWICH.

= = Illustrated Catalogue on Application. = =

NORTH OF ENGLAND

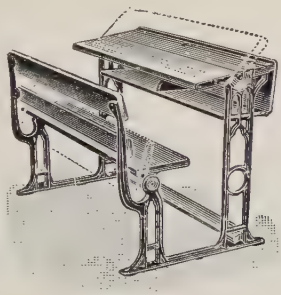
School Furnishing Co., Ltd.

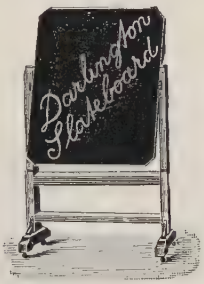
School and Church Furniture,
Technical College Fittings.

SOLE MAKERS of Celebrated "DARLINGTON" SLATEBOARDS.

GUARANTEED FOR 10 YEARS.

Single and Dual Box Desks.





Convertible & Reversible Desks a Speciality.

FOR LATEST RANGE OF

SINGLE, DUAL, AND CONVERTIBLE DESKS

See Stand at Conference.

LARGE SELECTION of TEACHERS' & SCHOLARS' DESKS.

Educational Booksellers and Stationers.

Addresses: Darlington, Newcastle, Sunderland, Middlesbro' & Norwich.

NEW CATALOGUES JUST PUBLISHED SENT PER RETURN ON APPLICATION.

Section A.—School Desks and Furniture.
" B.—Wilks' Patent "Climax" Sliding Partitions.
" C.—Church Furniture.
" D.—Fittings for Technical Colleges and Libraries.

WILD'S

Temperance Hotels, Ltd.,

FIRST CLASS,

30 to 40, Ludgate Hill, LONDON, E.C.

Central for Charing Cross, Cannon Street, and Holborn Viaduct Stations for the Continent.

ALSO AT

70 & 71, EUSTON SQUARE,

Close to Euston, Midland, and Great Northern Stations.

Home Comforts. Cleanliness & Quiet.

Central for Business or Pleasure.

Medal Makers

TO THE

ANCIENT ORDER OF ROMANS.

School Medals 5/6 per doz

for Regular attendance,
IN CARDBOARD BOXES.

Regular Attendance Medals.

Refined White Metal, with Ribbon and Suspender.
Each Medal fitted in a Cardboard Box, 5s. 6d. per doz.
Sample post free, 6½d.
Gilt do. 13s. per doz.
Velvet-lined Cases, 9d. each.

Silver Medals, 1s. 6d. each.

Silver Medals, with Gold Centre, 2s. 6d. each.

Cases for Silver Medals, Velvet Lined, 5d. each.

Telegraphic Address:
"OWEN, BRIGGATE, LEEDS."
National Telephone No: 753.

OWEN & ROBINSON, Ltd., Die Sinkers & Royal Medalists, 4, BRIGGATE, LEEDS.

TO MEMBERS OF THE NATIONAL UNION OF TEACHERS.

Messrs. S. W. PARTRIDGE & CO.

Have pleasure in asking Head Teachers to notice the following List of Books specially suitable for Schools and Colleges.

CAP'N NAT'S TREASURE: A Tale of Old Liverpool. By ROBERT LEIGHTON, Author of "The Pilots of Pomona," etc. Illustrated. Large Crown 8vo, cloth boards. 5s.

THOSE BERKELEY GIRLS. By LILLIAS CAMPBELL DAVIDSON, Author of "Into a Far Country." Illustrated. Large crown 8vo, cloth boards. 3s. 6d.

THE PARTING OF THE WAYS. By J. L. HORNIBROOK, Author of "In the Bonds of Silence." Illustrated Large crown 8vo, cloth boards. 3s. 6d.

A LION OF WESSEX; or, How Saxon Fought Dane. By TOM BEVAN. Large crown 8vo. Eight illustrations. Cloth boards, gilt top. 3s. 6d.

A BOY OF THE FIRST EMPIRE. By ELBRIDGE S. BROOKS. 332 pages. Six illustrations. Large crown 8vo, cloth boards, gilt top. 3s. 6d.

A LADY OF HIGH DEGREE. By JENNIE CHAPPELL Large crown 8vo. Illustrated. Cloth extra, gilt top. 3s 6d.

A GENTLEMAN OF ENGLAND: A Story of the Time of Sir Philip Sydney. By ELIZA F. POLLARD. Large crown 8vo, cloth extra, gilt top. 3s. 6d.

ONE OF THE TENTH: A Tale of the Royal Hussars. By WILLIAM JOHNSTON, Author of "Under the Sirdar's Flag," etc. Illustrated. Crown 8vo, cloth boards. 2s. 6d.

GOLD OR DROSS? By JOHN W. KNEESHAW, Author of "Norcliffe Court," etc. Illustrated. Crown 8vo, cloth boards. 2s. 6d

LOST IN THE SLAVE LAND; or, The Mystery of the Sacred Lamp Rock. By W. M. GRAYDON, Author of "The Fighting Lads of Devon," etc. Illustrated Crown 8vo, cloth boards. 2s. 6d.

CORAL; or, A Sea Waif and Her Friends. By CHARLOTTE MURRAY, Author of "Through Grey to Gold," etc. Crown 8vo, cloth boards. 2s. 6d.

ICE-BOUND; or, The Anticosti Crusoes. By EDWARD ROPER. Crown 8vo. Six illustrations. 320 pages. Handsomely bound in cloth boards. 2s. 6d.

THE BOY FROM CUBA: A School Story. By WALTER RHOADES. Crown 8vo. 320 pages. Illustrated. Handsomely bound in cloth boards. 2s. 6d.

BY SEA-SHORE, WOOD, AND MOORLAND: Peeps at Nature. By EDWARD STEP. Crown 8vo. 320 pages. Illustrated. Handsomely bound in cloth boards. 2s 6d.

WELL DONE! Stories of Brave Endeavour. Edited by C. D. MICHAEL, Author of "Heroes All," "Deeds of Daring," etc. Illustrated Crown 8vo, cloth boards. 1s. 6d.

For 50 years the imprint of S. W. PARTRIDGE & CO. has been a guarantee that the book is of a healthy moral tone, and that only productions of the highest quality as regards letter-press, paper, and binding, are issued by the firm.

SEND POST CARD FOR CATALOGUES, PRICE LISTS, &c.

S W. PARTRIDGE & CO., 8 & 9, Paternoster Row LONDON.

THOMAS MURBY'S
APPROVED TEXT-BOOKS.

Analysis of English History. The 100th Thousand. Completely Revised and Enlarged to 296 Pages, with Eight Full-page Maps. Cloth Boards, **1/-**; or, with **Biographical Appendix**, 372 Pages, **1/6**, Cloth Boards.

"A work we can specially recommend."—*Civil Service Gazette.*

Castell-Evans' Experimental Chemistry, including Qualitative and Quantitative Analysis. By JOHN CASTELL-EVANS, F.I.C., Technical College, Finsbury. (4th Edition.) **2s. 6d.** With Key, **6s.**; Key, **5s.**

"Far in advance, from an educational point of view, of anything that has appeared as yet in this country."—*Journal of Education.*

Hobbs' Arithmetic of Electrical Measurements. (10th Ed.) Revised by Dr. WORMELL, M.A., Editor and Joint-Author of "Electricity in the Service of Man." With numerous Examples fully worked. Cloth, **1s.**

Skertchly's Geology. (10th Ed.) Revised by JAMES MONCKMAN, D.Sc. Price **1s. 6d.**, Cloth.

Skertchly's Physical Geography. (33rd Ed.) Revised by J. H. HOWELL, B.A., Civil Service Department, King's College. Cloth, **1s.**

Rutley's Mineralogy. (13th Ed.) Containing a New Section on the recently adopted treatment of Crystal Symmetry, with Table of the 32 Symmetry Groups. Cloth, **2s**

Meldola's Inorganic Chemistry. Metals and Non-Metals. With Chapters on Chemical and Spectrum Analysis, Chemical Laws, Deduction of Formulæ, and Modes of Chemical Action. By RAPHAEL MELDOLA, F.C.S. Revised by J. CASTELL-EVANS, F.I.C. (6th Ed.) Cloth, **2s.**

A very successful student writes of this work:—"I have found it very useful indeed . . . especially for revision purposes. It contains a maximum of the most useful information in the smallest possible compass."—S. H. J. GOFFIN, B.A., LL.B. (Cantab.).

ARITHMETIC, ALGEBRA, MENSURATION, Etc.

Wormell's Arithmetic for Schools and Colleges. New Edition, F'cap. 8vo, 300 pp., **2s**; with Answers, 382 pp., **3s.**; Answers separate, **1s.** By Dr. R. WORMELL, M.A.

Wormell's Shilling Arithmetic. For all classes of Elementary Schools. Revised Edition. 224 pp., F'cap. 8vo. Price **1s.**, Cloth Boards; with Answers, **1s. 6d.** Answers, **6d**

Murby's Algebra for Beginners. New Edition, enlarged. Up to Quadratic Equations. By W. DODDS. Price **1s.** With Answers, **1s. 4d.**

Easy Algebraic Products and Factors. By W. DODDS. Price **8d.** With Answers, **9d** Answers separate, **3d.**

Murby's Duplex Arithmetical Examples. Slate and Mental. By GEORGE MIDDLEDITCH. Complete, Cloth Boards, **1s. 6d.** With Answers, **2s.**

"Amongst the excellent few . . none better."—*Teachers' Aid*

Murby's Mensuration for Beginners. Plane and Solid. By W. DODDS. Price **1s.** With Answers, **1s. 4d.** Answers, **6d.** Part I. For Standard VII. and 3rd year Pupil Teachers, price **4d.**

MURBY'S SCRIPTURE MANUALS, Etc.

New and Improved Editions mostly with Maps, now for the first time reduced to a uniform price of **6d.** each all round.

OLD TESTAMENT HISTORY.

Genesis. Exodus. Numbers, Joshua. Judges. First Samuel. Second Samuel. Ruth, Haggai, and Esther. First Kings. Second of Kings. Ezra and Nehemiah Jeremiah

NEW TESTAMENT HISTORY.

St. Matthew. St. Mark. St. Luke. St. John. Acts of the Apostles. 1 Corinthians. 2 Corinthians. St. James. Philippians. Galatians.

MUSIC AND DRAWING.

Murby's 'Charming' School Cantatas. "Elsa," **2s.**; "Dimplechin," **2s.**; Shakespeare's "Merry Meeting," **2s.**; "Five o'clock Tea," **2s. 6d.**; "Hobby Horse," **1s.**; "Up the Airy Mountain," **6d.**

Murby's Diamond Drawing Books (Plain). Made of superior paper in superbly ornamented wrappers. Fourteen different sizes, varying in price from **1d.** to **8d.** each.

London: Thomas Murby, 3, Ludgate Circus Buildings, E.C.

THE

London, Edinburgh & Glasgow Assurance Co.

LIMITED

(ESTABLISHED 1881),

Are ready to appoint during 1903

50 ADDITIONAL ASSISTANT-SUPERINTENDENTS

With every opportunity for further promotion.

PREFERENCE WILL BE GIVEN TO YOUNG MEN IN THE SERVICE AS AGENTS.

Early Application Necessary.

— OVER £2,000,000 PAID IN CLAIMS. —

THOS. NEILL,
General Manager.

THE

CARNEGIE

EDUCATIONAL PEN

(FINE AND MEDIUM POINTS).

Specially Manufactured for use in Schools.

Per Gross - - **1/6**. Sold by all Stationers.

Samples can be obtained at Stall No. 33a, left side of Corridor.

MACNIVEN & CAMERON LTD.,

Waverley Works, EDINBURGH; LONDON & BIRMINGHAM.

The Largest and most complete . . . .

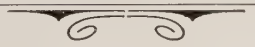
Scholastic Establishment in the Kingdom.

FREE ON APPLICATION, a Large

CLASSIFIED & SELECTED LIST

OF

School Stationery



(UNSURPASSED FOR QUALITY COMBINED WITH CHEAPNESS),

Books, Materials, Appliances, &c.,

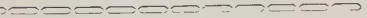
MANUFACTURED

AND SUPPLIED BY

JOHN HEYWOOD,

Educational Publisher and Scholastic Contractor,
Kindergarten Depot,
Furniture Manufacturer,
Largest Dealer in Prize Books in the Kingdom,

Deansgate & Ridgefield, MANCHESTER.



BOARDS OF EDUCATION, HEADMASTERS, TEACHERS, and the CLERGY, before ordering, are invited to send for my Lists and Specimens. They will find UNDENIABLE and INCONTESTABLE Value.

All descriptions of School Stationery made up to any Pattern. Estimates Free.

*

FREE ON APPLICATION.

A SPECIAL . . . ILLUSTRATED . LIST OF . . . .

BOOKS

offered at exceedingly low prices,

. . . including . . .

ENTIRE PURCHASES of HIGH-CLASS REMAINDERS,

which cannot be obtained elsewhere.

Suitable for Presents, Day and Sunday School Prizes, Libraries, Birthday Gifts, Books for Children, and a First-Class Collection of Specialities for P.S.A. and kindred societies. Secretaries are invited to inquire for further particulars.

IMPORTANT NOTICE.

When possible please state substitutes in case any are sold out. We will carefully select if not stated.

1.—The largest stock in Great Britain of all classes of literature at discount prices.

2.—All popular works obtained immediately after publication. Standard Book Catalogue, Free.

3.—Books not in stock are procured by return. American and Foreign publications obtained with the least possible delay. Out of print and scarce volumes advertised for and reported upon free of charge.

4.—Representative stock of Scientific, Technical, and Medical Works.

5.—Post Orders receive prompt and careful attention. Accounts may be opened when desired.

6.—Libraries and Institutions supplied on best terms, with speed and accuracy.

7.—Day and Sunday School Reward Books in magnificent assortments. Special entire purchases offered at great reductions, as per this List. New Bargains constantly being bought.

8.—College, Public, and High School Prizes tendered for, and samples of Bargains submitted.

9.—A large stock of handsomely bound volumes for Presentation or School and College Prizes, in leather, calf, morocco, &c., always on hand. Books to order in any binding. A SEPARATE CATALOGUE may be had on application.

10.—P.S.A. and kindred societies supplied at lowest possible rates. Unique offers which cannot be obtained elsewhere. Magnificent ranges. Parcels sent on approbation.

11.—School Libraries supplied on advantageous terms. Advice, reports of prices, &c., gratis.

12.—Prize Labels 2s. per 100. One gratis to each Prize bought from me, on application. Carriage Paid on all orders wherever possible.

Address all Communications plainly to—

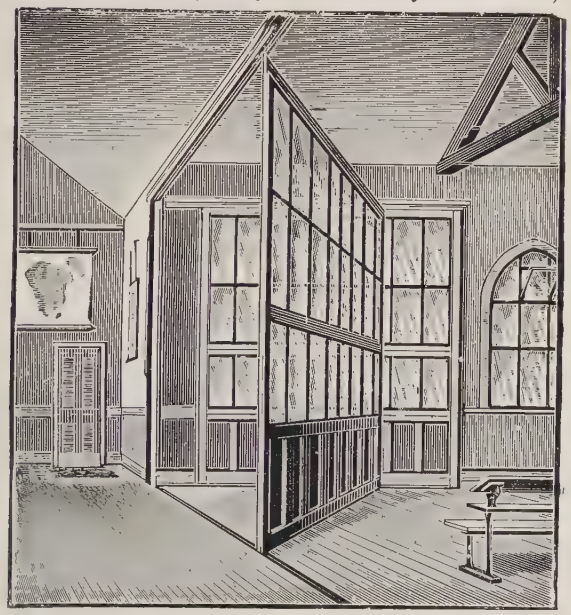
JOHN HEYWOOD, Book Department, Deansgate & Ridgefield, **MANCHESTER**

National Telephone: 553. *Telegrams: "Books, Manchester."*

JOHN HEYWOOD'S

Improved Movable Partitions (STRAPPS')

For Institutions, Day & Sunday Schools, etc.



Position of Partition when in process of being closed.

The attention of Architects, Directors of Education, School Managers, &c., is directed to Strapps's Patent Movable Partitions, which will be found to have the following advantages:—

1.—Their **simplicity of construction** is such that they can be fixed at a minimum of expense and moved with ease: a Sixth Standard Boy or a Female Teacher can move them.

2.—Being made in **wide sections** there are less joints for sound to pass through. They take up very little room from the wall when not in use.

3.—There are **no hinges** to get out of order or wear out.

4.—Along the top of the partition provision can be made for **ventilation.**

5.—They have the approval and commendation of H.M. Inspectors of Schools, and meet the requirements of the Education Department.

6. Their simplicity of construction and adaptability for Schools are such as to enable me to give a guarantee with every partition fixed by me.

School Managers and others requiring a simply constructed, elegant, and effective partition, and one that will work easily and not be liable to get out of order, are invited to inspect one of the partitions fixed by me, particulars of which will be sent on application. No other partition can equal it. **Saves time, money, space,** and **inconvenience;** rapidly transforming a large room into separate class-rooms.

Sole Manufacturer: **JOHN HEYWOOD,**

Church, School, & Office Furniture Manufacturer, MANCHESTER.

JOHN HEYWOOD'S

Special "Globe" Series

OF

EDUCATIONAL

Wall Pictures.

35 × 25in. outside size of frame, strongly framed in oak, gilt slip. **7/6** *each net. Packing extra.*

Highly recommended. Superior to any other series.
Beautiful Specimens of Photographic Art.

Unframed and Mounted, 31 × 21in., **2/6** each net.

Campania
Menai Bridge
Tor-Matlock
Canada Dock
Lomond
Katrine
Ship Canal
Needles
Newcastle Bridges
Snowdon
Lighthouse, New Brighton
Liverpool Landing Stage
Thirlmere and Helvellyn
Grasmere
Rydal Water

John Heywood's New "Gem" Series of Coloured Pictures for

CONVERSATIONAL LESSONS.

12 selected subjects, strongly framed in oak, with movable back.
Highly recommended. Great care has been exercised in the selection of suitable subjects.
Insist on having John Heywood's "Gem" Series. PRICE, complete in frame, **7/6** net.

A Striking Success.

RESEARCH WORK

— *ON* —

Popular and General Subjects.

By J. B. TOMLINSON.

QUESTIONS, price 2d.

ANSWERS, Cloth Bound, 1s. Net.

INTRODUCTION TO "RESEARCH WORK."

THE questions herein contained have all, at various times and in various schools, been given to and, in the main, answered by scholars varying from Standards III. to VII.

They are the result of years of experience, and have proved a very serviceable addition to the ordinary school work, having been put into practice with excellent results.

INDEX TO SECTIONS OF "RESEARCH WORK."

1. Questions on General Subjects 1
2. Natural History 11
3. Geography, Geology, Physiography, Astronomy 15
4. History, Mythology 22
5. Literature, Art, Archæology 28
6. General Science—Elementary 34
7. Hygiene, Physiology 39
8. Recent Invention, New Words 42

JOHN HEYWOOD, Deansgate and Ridgefield, **MANCHESTER.**

PERFECT COPY BOOKS.

JOHN HEYWOOD'S

COPY BOOKS.

32pp., **2d.**

In Nine books, an Introductory Book for Infants and Standard I., one for each Standard, and an additional book for Standards IV. to VII. 32 pages. Superior quality paper.

"A flowing pleasantly-rounded hand, easy to write and easy to read."

Book A.—	Introductory	... ...	For Infants and Standard I.
,, 1.—	Standard I.	... ...	Large Hand and Figures.
,, 2.—	,, II.	... ...	...Large, Half Text and Figures.
,, 3.—	,, III.	...	Small (Double Lines), Large, Half Text and Figures.
,, 4.—	,, IV.	...	Small (Double and Single Lines), Large, Half Text and Figures.
,, 5.—	,, V.	... ...	Small, Large, Half Text and Figures.
,, 6.—	,, VI.		
,, 7.—	,, VII.		
,, 8.—	Combined for Standards IV. to VII.	... ...	Small Hand only.

Price 2d. each; 1s. 6d. per dozen net. Specimens Free.

The Journal of Education says:—

"John Heywood's 'Globe' Series consists of Nine Books adapted to the standards of Elementary Schools. The motto printed on the covers: 'A flowing pleasantly-rounded hand, easy to write and easy to read,' is amply justified. The style of penmanship is exceptionally clear and attractive, and the paper is thick and of excellent quality. Thirty-two pages in a stout cover for 2d. A record in cheapness, surely!"

"We heartily recommend the Series."—*Educational News.*

"These books are nearer than anything I have seen to my idea of perfection."—The Head Master, Dunheved College, Launceston.

"They are just what I have been looking out for."—A Head Master, Tamworth-in-Arden, Birmingham.

The Head Master of a large school in Kilburn says, "They are second to none in the market."

In a recent Handwriting Competition, held in the North of England, 2 out of the 3 Gold Medals offered were won by Scholars using John Heywood's "Globe" Copy Books.

Published by JOHN HEYWOOD, Deansgate and Ridgefield, Manchester; 29 and 30, Shoe Lane, London, E.C.

Your attention is particularly invited to John Heywood's Exhibition of Scholastic Books, Materials, and Appliances, which are highly recommended. Please make a special note to see his Furniture Stall, and the Model Sliding Partition.

A SELECTION FROM

John Heywood's Publications.

Botany, Elements of. By W. J. Browne, M.A., Lond., M.R.I.A., Inspector of Schools. Fifth Edition. Re-written, and greatly enlarged, with 173 Illustrations. 280pp. Crown 8vo, cloth boards. 2s. 6d. "A most satisfactory introduction to the Science of Botany."

Civic Life: Its Duties and Responsibilities. For Evening Continuation Schools. By Alfonzo Gardiner, author of "Sound, Light, and Heat," "Elementary Drawing under the Board of Education," &c. The author has followed the Syllabus very closely, and has kept all important points prominently before him. Each subject is prefaced by a few History Notes, showing in brief the growth of the various parts of our Constitution and of our Local Institutions. All technical terms (such as "voting," "electing," "franchise," "register," &c.). are clearly explained as they occur. Political and Social questions are fully treated, etc. Crown 8vo, cloth. 270pp. 2s.; offered at 1s. net.

County Maps. Compiled by C. Everson. Everson's **Clear** Maps are absolutely the best for Schools, Libraries, or Office Use. An Unique Series.

Lancashire	10s. 6d. net.
Yorkshire	12s. 6d. ,,
Wales	10s. 6d. ,,
Staffordshire	10s. 6d. ,,
Northumberland	6s. 6d. ,,
Durham	6s. 6d. ,,
Cumberland and Westmorland	6s. 6d. ,,
Cheshire	10s. 6d. ,,
Gloucester	10s. 6d. ,,

See this Series before purchasing any other Wall Map.

Drawing under the Board of Education (Elementary).

By Alfonzo Gardiner. Being the 12th Edition, entirely re-written and extended, of "How to Earn the Drawing Grant." A practical Handbook for Teachers. **600 Diagrams.**

Note.—The abolition of individual examination leaves the teacher with a much freer hand, and brief, but it is hoped, useful directions are given for commencing and carrying on **Brush Drawing**, **Simple Designing**, and **Free-arm Drawing**, along with the ordinary **Free-hand and Geometrical Work** of the original syllabus

Cloth boards, 376 pp. 5s.

Shakespeare Manuals (The Dinglewood Series). Edited by STANLEY WOOD, M.A., Dinglewood School, Colwyn Bay. This series has won unstinted praise from the scholastic press and profession. Altogether different from any other series.

	s.	d.
Hamlet: Questions and Notes	1	0
Hamlet: 250 Questions on	0	6
Hamlet: Questions and Notes—Supplement to	0	6
Coriolanus: Questions and Notes	0	9
Merchant of Venice	1	0
Merchant of Venice: Supplement to ....net	0	6
Julius Cæsar: Questions and Notes	1	0
Julius Cæsar: Questions and Notes—Supplement to	0	6
Henry the Fifth: Questions and Notes	1	0
The Tempest: Questions and Notes	1	0
The Tempest: Questions and Notes—Supplement to	0	6
Richard II.	1	0
Notes, &c., to ditto	0	6
As You Like It: Questions and Notes	1	0
As You Like It: Supplement to	0	6
The Teaching of Shakespeare in Schools	0	3
A Midsummer Night's Dream	1	0
Macbeth	1	0

Manuals upon the remaining Dramas of Shakespeare will be published in the order and at the period of the publication of the Syllabus of the Oxford and Cambridge Local Examinations.

Euclid. By H. GREEN. The Geometry of Plane Triangles, founded on Simson's Text, with Explanatory Notes, showing the uses of the Propositions, etc. New Edition. Crown 8vo, cloth, 6d.

> "In this little book the geometrical student has all the aids that a writer of books can give him. We strongly recommend every student who thinks Euclid dry, repulsive, or uninteresting, to get this little book."—*Schoolmaster.*

English History Dates upon a New Plan. From B.C. 450 to A.D. 1900. By W. J. H. HASSALL. New Edition. F'cap 8vo, sewed, 3d.

Geography, The Instructive. A Lesson Book for Teachers and Students. Every hard word is accentuated and syllabicated so as to make the work of reading and learning easier. Numerous hints to the teacher are given as foot-notes. By ALFONZO GARDINER. F'cap 8vo, cloth, 320pp., including 70 New Maps and Diagrams. New Edition, revised, 2s. 6d.; offered at 1s. net.

Music, Rudiments of the Theory of. A Handbook for the use of Pupil Teachers and others studying for Examination. By ALFONZO GARDINER. An earnest endeavour to clear up difficulties and to make rough places plain by means of numerous examples and diagrams is the feature especially present in this book. The Staff and the Tonic Sol-fa notations are treated of side by side, each helping to the understanding of the other. The pronunciation is given of all the Italian and other foreign words used as terms of expression, pace, or style. The chromatic scale, and the intervals formed in it, receive a large share of attention. Sets of questions, in both notations, with full answers. Crown 8vo, cloth boards, 3s., offered at 1s. 6d. net.

JOHN HEYWOOD,

Educational Publisher,

Deansgate and Ridgefield, MANCHESTER.

JOHN HEYWOOD'S.

The Leading ART ESTABLISHMENT

IN THE KINGDOM.

Every Material for Artists in Stock.

ORDERS ARE DESPATCHED THE DAY THEY ARE RECEIVED.

A Catalogue containing full Particulars and Prices of every Article used in Art work will be forwarded to any Address Post Free on application.

MATERIALS.

Wood Carving, Poker Work,
Sketching, Drawing, Painting,
Copying, Crystoleum, Fretwork,
White Wood,
Staining and Enamelling.

LARGE HIGH-CLASS STOCK KEPT.
REASONABLE PRICES.

SEND FOR A CATALOGUE GIVING FULL PARTICULARS.

Picture Framing Dept. (Room No. 7)

Every description of Framing done—Best English Gold—White and Gold—Black and Gold—Green and Gold—Plain and Polished Oak. *All finished in the best possible manner.*

A large assortment of Framed and Unframed Pictures in stock, Gravures, Etchings, &c., after all the best and noted artists.

JOHN HEYWOOD,

Deansgate and Ridgefield, MANCHESTER.

Typists' Manual, The.

An Elementary Text-book for Commercial Students. Specially adapted to the Remington and Yost Machines, but applicable to any make of Typewriter. By E. COLLYNS, Head Teacher of Typewriting at the Cusack Institute, London, and late Head Teacher of Typewriting to the Manchester School Board. For the use of Commercial Schools, Continuation Schools, Evening Classes, and Self-Instruction. Specially recommended in the Society of Arts' Syllabus for preparation for the Society of Arts' Typewriting Examination ; also for preparation for the Union of Lancashire and Cheshire Institutes, and other Typewriting Examinations. Crown 8vo. Fourth Edition—Revised and Enlarged. Cloth, 172pp., 2s. Absolutely the Best Manual obtainable. See Press Opinions.

Typists' Advanced Manual, The.

By E. COLLYNS. A Practical Guide for all Classes of Copying. Applicable to any make of Typewriter. Specially recommended in the Society of Arts' Syllabus for preparing Students for the Society of Arts' Typewriting Examination. Also for the use of Advanced Students in Commercial Schools, Technical Schools, Colleges, and for Self-instruction. Demy 4to, cloth, 118pp., 3s.

Book-keeping and Office Routine.

A Course of Practical Instruction in Commercial Book-keeping, and the General Work of an Office jointly. Including Full Instruction in Shipping Transactions, Imports and Exports, with Exercises on the Use of the Decimal System of Foreign Money and Measures. Specially prepared for beginners. Illustrated with Numerous Forms of Books and Documents, as actually used in Business. By W. J. GREENWOOD, Public Accountant and Auditor. Founder of the Business Routine Classes in England. Part 1., for Beginners, cloth, 1s. 6d. net. Part 2, Advanced, cloth, 1s. 6d. net. Parts 1 and 2, complete in one volume 3s. net. Key, complete, 1s. 6d. net.

Book-keeping Made Easy.

(Technical Instruction Manual.) Single and Double Entry, by W. J. GREENWOOD. Specially arranged for use in Evening Classes, Continuation and Commercial Schools, also for Self-Instruction, with tables of Foreign Money. Weights and Measures, and Explanations of Commercial Terms. Seventh Edition, revised and enlarged, with key. 1s. 6d.

Business Practice.

(*Supplement to "Commercial Correspondence."*) Contains notes on all the Letters. Full Explanations of Usual Business Operations and Terms, with Foreign Equivalents and a Complete List of Commercial Abbreviations. By W. J. GREENWOOD. Cloth, 1s.

Commercial Correspondence.

By WM. J. GREENWOOD. This work contains over 400 Letters and Commercial Forms treating on every variety of business transaction : Circulars, Legal Notices, Agency Business, Consignments, Accounts Current, Bills of Exchange, Remittances, and General Counting-house Matters ; Selling, Buying, Chartering of Vessels, Shipping, Bankruptcies, Claims, Hypothecation, &c., &c. Specially suited for preparing for the Public Examinations of the Society of Arts, &c., in Typewriting, Shorthand, and Commercia English. Third Edition. Cloth, 2s. 6d. ; with Business Practice, 3s. 6d

JOHN HEYWOOD, Publisher, Manchester and London.

NORMAL CORRESPONDENCE COLLEGE.

P.T., SCHOLARSHIP, and CERTIFICATE CLASSES.

It is generally acknowledged that no Correspondence Class in the Kingdom can give such efficient and complete aid as the Normal Correspondence College *(see Press Opinions, Inspectors' remarks and recommendations, and the testimony of those who have received our tuition)*.

We have TWICE taken the HIGHEST PLACE of any Correspondence College, Class, or other Institution at the King's Scholarship Examination, and have also been the most successful at the two last Diploma Examinations.

No other tutors attempt to cover the whole of the present Scholarship and Certificate requirements. The most they do is to provide tuition in certain subjects, and then recommend their students to take the same subjects. We give our pupils advice uninfluenced by these considerations, for we provide **expert** tuition in all subjects, including the following:—

ART.

Instruction in this also forms part of our ordinary P.T., Scholarship, and Certificate Courses without extra fee. Tuition is given in:—

1. **Freehand.**
2. **Geometrical Drawing.**
3. **Perspective.**
4. **Light and Shade.**
5. **Blackboard.**
6. **Principles of Ornament.**
7. **Architecture.**
8. **Anatomy.**
9. **Animal Drawing.**
10. **Brush Drawing.**
11. **Decorative Illustration.**
    (*a*) Elementary.
    (*b*) Advanced.
12. **Design.**
13. **Figure Composition.**
14. **Model Drawing.**
15. **Plant Drawing with pencil, chalk, pen, or brush.**
16. **Painting.**
    (*a*) Oil.
    (*b*) Watercolour.
    (*c*) Tempera.

Non-pupils who wish for instruction in Art only should send for our ART PROSPECTUS.

SCIENCES.

The P.T., Scholarship, and Certificate courses also include instruction in ANY of the following when prescribed by the Syllabus without extra fee.

1. **Nature Knowledge.**
2. **Physiography.**
3. **Hygiene.**
4. **Physiology.**
5. **Biology.**
6. **Chemistry.**
7. **Sound.**
8. **Light.**
9. **Heat.**
10. **Botany.**
11. **Mechanics** (Solids).
12. **Mechanics** (Fluids).
13. **Electricity and Magnetism.**
14. **Agriculture.**
15. **Geology.**
16. **Plane and Solid Geometry.**
17. **Building Construction.**
18. **Woodwork.**

Non-pupils should send for our SCIENCE PROSPECTUS.

MATHEMATICS.

Students may join the Normal Classes for Mathematics only, if required. The instruction covers the whole of the **Seven Stages** of the South Kensington Examinations. PROSPECTUS SENT ON APPLICATION.

LANGUAGES.

Our Pupil Teacher, Scholarship, and Certificate Pupils may have tuition in ANY language as prescribed in the Syllabus without extra fee.

1. **Greek.**
2. **Latin.**
3. **German.**
4. **French.**
5. **Hebrew.**
6. **Welsh.**
7. **Italian.**
8. **Spanish.**
9. **Portuguese.**
10. **Gaelic.**

Non-pupils should send for our LANGUAGE PROSPECTUS.

NEEDLEWORK & DRESS-CUTTING.

Pupils who wish for instruction in this subject should apply for our NEEDLEWORK and DRESS-CUTTING PROSPECTUS.

RELIGIOUS KNOWLEDGE.

Students who wish to pass Diocesan or other Religious Knowledge Examinations here have the opportunity of receiving the best possible preparation in this subject.

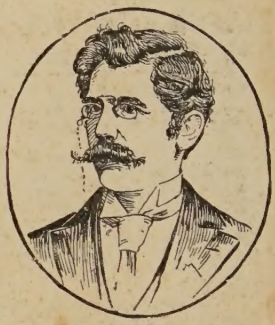
Normal Corr. Coll., 47, Melford Road, East Dulwich, London, S.E. 110, Avondale Square, London, S.E.

At the King's Scholarship Examination this College has **TWICE** taken the

FIRST . . .

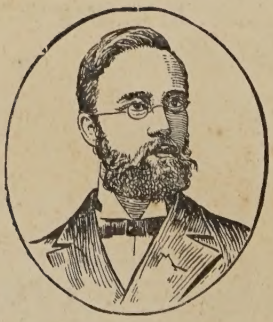
PLACE . . .

of any Correspondence College, Class, or similar Institution.



Mr. P. LYDDON-ROBERTS, A.C.P., &c.
Trained Certificated Master, 1st Class.
P.T. and Scholarship Specialist.

NORMAL
CORRESPONDENCE
COLLEGE.



Professor E. E. DENNEY,
Trained Certificated Master, 1st Class.
Certificate Specialist.

FREE GUIDES.

1.	A.C.P. - -	64 pages.
2.	L.C.P. - -	76 „
3.	F.C.P. - -	75 „
4.	Scholarship	80 „
5.	Certificate	40 „

"Very useful and dependable" *Schoolmaster.*

"These guides are written by experts whose advice on the different points is the best procurable."—*Educational News.*

NORMAL CORR. COLL., 47, Melford Road, E. Dulwich, London, S.E. or 110, Avondale Square, London, S.E.

Teachers'

Superannuation Act.

Many Teachers are fortifying the weak points in the recent Superannuation Scheme by making additional provision for themselves in the event of their reaching the reduced income age (65), and by securing as large a sum as possible for those dependent upon them in event of their previous death. For an explanatory pamphlet apply to the

SCOTTISH PROVIDENT

ESTAB. 1837. # INSTITUTION.

Accumulated Funds - £12,500,000.

In this Society are combined the **advantages** of **Mutual Assurance with Moderate Premiums.**

THE PREMIUMS are so moderate that at usual ages for Assurance £1,200 or thereby may be secured from the first for the yearly payment which would generally elsewhere assure (with profits) £1,000 only, the difference being equivalent to

An immediate and certain Bonus of 20 per cent.

THE WHOLE SURPLUS goes to the Policy-holders on a system at once safe and equitable. The immediate assurance for the premium payable being exceptionally large, the surplus is reserved exclusively for the policies of those members who prove to be good lives.

Head Office: 6, ST. ANDREW SQUARE, EDINBURGH.

Manchester: 10, ALBERT SQUARE. **Birmingham: 96, COLMORE ROW.**
London: 17, KING WILLIAM ST., E.C. **West End Office: 17, PALL MALL, S.W.**